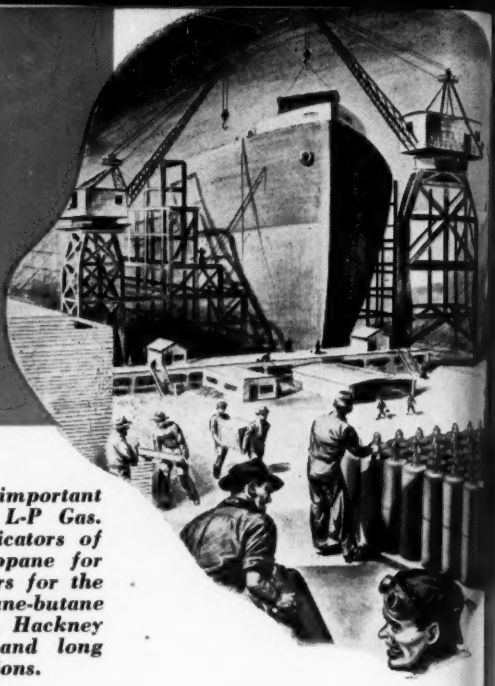
BUTANE-PROPANE News

25¢

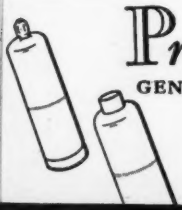
OCTOBER 1943

L-P *gas and Hackney Cylinders help build ships . . .*



Cutting of metal is among the many important wartime services being performed by L-P Gas. Many shipyards, as well as other fabricators of steel are recognizing the value of propane for cutting. The value of Hackney cylinders for the storage and transportation of propane-butane has been recognized for years. Today, Hackney cylinders are assuring dependability and long life in many wartime L-P Gas applications.

Hackney Propane-Butane cylinders provide time-tested dependability and satisfactory performance. They are engineered to meet the requirements in the transportation of LP-Gas from producer or distributor to user. The Hackney Process of cold drawing assures uniform sidewall thickness and, further, is a test of the quality of the steel itself. In the design and construction of Hackney LP-Gas cylinders, there is only a single body weld. Welding is X-ray controlled. Heat treatment of the finished cylinder assures continuous trouble-free service. Thus, there is no interruption in skill, knowledge, imagination, and Hackney's research in product improvement. These are continuing. You are assured that the qualities which have won a preference in the industry continue to be found in Hackney Cylinders.



Pressed Steel Tank Company

GENERAL OFFICES AND FACTORY · 1487 SOUTH 66th STREET

Milwaukee, Wisconsin

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

2 Good Investments

For your post-war comforts and luxuries, for a quicker victory, and for a secure, safe America, buy war bonds.

Invest your money now, at a generous rate of interest, in war bonds. It's a good investment.

Anchorgas also is aiding our nation at war. As leading producers and marketers of Butane and Propane, Anchor is serving on both the home and industrial front.

Tie up with Anchor now. It's an investment in your future and an assurance of dependable, high quality fuels.

Anchorgas

ANCHOR
PETROLEUM COMPANY
TULSA, OKLAHOMA
BUTANE-PROPANE

BUTANE-PROPANE *News*

Reg. U. S. Pat. Off.

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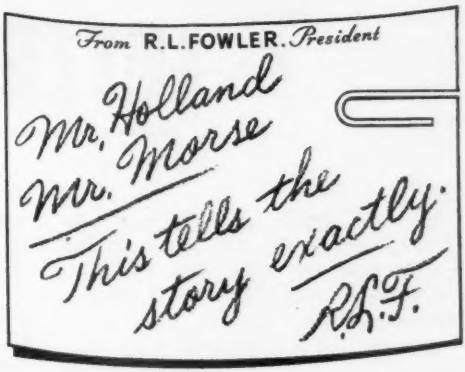
FLORENCE STOVE CO.
GARDNER, MASS.

"BETWEEN-SHIFTS" THINKING ON POST-WAR PROBLEMS



We've all got a big responsibility—come V-Day.

One of two things will happen: either Business will take care of 136 million people, or Uncle Sam will have to carry on.

It's just plain common sense to recognize these facts:

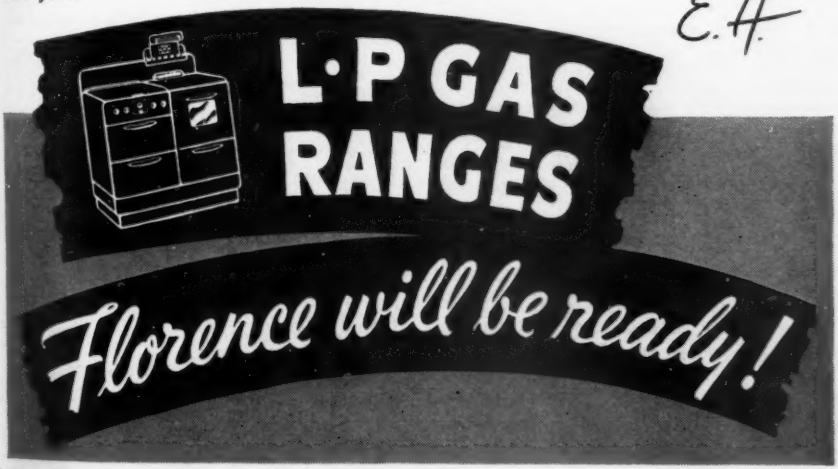
1. **The demand for many classes of durable goods will probably be twice as great as in 1940.**
2. **Unless manufacturers and dealers can meet this demand *quickly* we'll have inflation—or more rationing.**
3. **Any timidity—any let's-wait-and-see policy may result in harmful unemployment. We've got to be ready for *mass* markets.**

Florence aims to be ready. **War work has kept us in fighting trim—with men and machines on the line for quick conversion to ranges and heaters in volume.**

You can look to Florence in L-P Gas Ranges for common sense design, high quality, moderate prices, dependable value. You can expect a dealer live-and-let-live policy that protects the retail merchant.

That's the Florence story. **It means that you can *Look to Florence—without fail!***

E.H.



LETTERS

Gentlemen:

We are specializing in the sale of oxy-butane heating and cutting torches and are faced with a technical problem which we would like to have you solve.

We are now installing a 10-cylinder oxygen manifold and wish to install a manifold for 100-lb. butane cylinders for use in conjunction with the oxygen manifold. We will be operating two cutting torches and three heating torches, which will consume about 500 cu. ft. of fuel gas per hour.

Please advise the number of butane cylinders you would recommend manifolding and the proper type of regulator which will allow a sufficient expansion of the gas. During the winter months, the butane manifold will have to yield 500 cu. ft. per hour at a temperature of 0° F.

J.N.A.

Michigan

It must be remembered that butane will not vaporize at zero degrees F., as it liquefies when the atmospheric temperature falls to 32° above zero.

It is definitely indicated that if you must provide for freezing temperatures that you should use straight propane and it would require 20 100-lb. cylinders for manifolding with your oxygen cylinders to obtain a yield of 500 cu. ft. per hour at zero.

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Gentlemen:

I have been advised that you are interested in any current interpretations of price schedules under my jurisdiction that involve liquefied petroleum gas. Recently our California office raised the question as to whether the 3-cent margin provisions applicable to retail establishments selling motor fuel were applicable to sales of butane. An interpretation was issued to the effect that when it is sold as a motor fuel at a retail establishment, generally a service station, to be used for the propulsion of motor vehicles, the seller may charge a price sufficient to give him at least a 3-cent margin. As you know the seller's margin in this area has normally been about 2½ cents.

The interpretation was issued under Maximum Price Regulation No. 137. It may be that the Petroleum Branch will decide to exclude such sales from the 3-cent margin provision but under the schedule as it now exists it has been ruled that the seller is entitled to at least a 3-cent margin.

W. Page Keeton,
Chief Counsel, Petroleum Branch,
Office of Price Administration,
Washington, D.C.

Thank you for clearing up this point on the sale of butane.—Ed.

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Gentlemen:

I just recently purchased the butane delivery and sales and service business from Frank W. Foster of Tracy, Calif. I have a 1400-gal. cab over engine Diamond-T truck and am delivering fuel as well as sales and service.

I would like to enter my subscription for three years for the BUTANE-PROPANE *News*.

I have been in the butane business almost continuously in the past eight years and have read every copy of BUTANE-PROPANE *News* that I could

get ever since it was published. There is no other book that gives the news and helpful information that can be obtained from this book. I would like to start with the August copy, and you can send the bill with it.

E. H. GROGAN, JR.

Stockton, California

Thanks for your frank approval. If you encounter any difficult problems in your new business, write our Research Department and we will try to help you.—Ed.

•

Gentlemen:

One of our customers in a foreign country has requested that we obtain a small gas plant that will manufacture bottled gas or coal gas to be used in supplying about 1000 apartments and a few stores with gas for cooking and heating. We wonder if you could suggest the name of some manufacturer to us who might make such small gas plants.

F.R.M.

New Jersey

The American Liquid Gas Corp., 1109 S. Santa Fe Ave., Los Angeles, or the Gasair Corp., 1072 Bryant St., San Francisco, can supply complete plants for storage and distribution of liquefied petroleum gases.—Ed.

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Gentlemen:

I would like to know if there has been any recent ruling in regards to taking on new bottle gas customers where you have used equipment that you have to install.

I am particularly interested in knowing the latest ruling in regards to placing our gas cylinders to stoves and equipment that were formerly served by some other company, and for some reason or other discontinued.

I take BUTANE-PROPANE *News* and perhaps have missed some write-up in regards to the above, as some of the competitive dealers have been taking on new customers and have even had the nerve to undersell and place the equipment with two of my customers.

Will greatly thank you for a letter on the above matter, clearly outlining each subject.

C.D.N.

South Carolina

We do not know of any recent ruling regarding the serving of new customers other than contained in Limitation Orders L-86 and L-79.

In all new installations you must comply with the provision that the installation is either essential to the war effort or it supplies a family which would otherwise be without fuel and equipment. Our understanding is that new equipment cannot be installed if you have old equipment on hand which was in service before April 1, 1942, and was thereafter taken out and is still in your stock.

If you will refer to the June issue of BUTANE-PROPANE *News* you will see that the direction of liquefied petroleum gas has been transferred from the War Production Board to the Petroleum Administration for War and in all cases where you wish to make installations and you are in doubt as to the legality of them it is well to write to the nearest office of the PAW or to the Washington office.

We do not believe there is any regulation governing the serving of another company's customers. Each installation must stand upon its own merits as regards to the need of the users.—Ed.

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Gentlemen:

I have a summer home at Nester Falls, Ontario, Canada, and have been using butane-propane as cooking gas which I have had to order from Ottawa. That is many miles away and I wonder if there is not a nearer source of supply.

R. B. M.

Illinois

No doubt Winnipeg, Manitoba, would be your closest source of supply. There is a dealer there named North Star Oil Co. Ltd., T. N. Clayton, general manager.—Ed.

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• BUTANE-PROPANE *News* welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed.—Editor.

The Visible Future

By KENNETH R. D. WOLFE

Assistant Sales Manager, Fisher Governor Company,
Marshalltown, Iowa

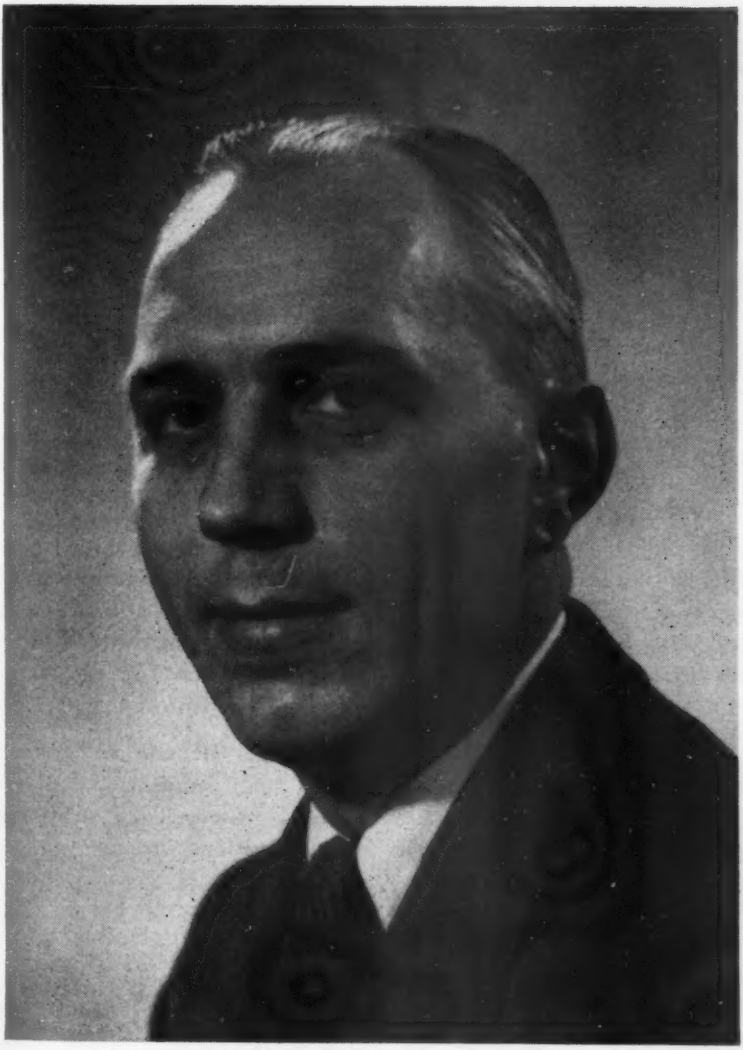
WHAT will the liquefied petroleum gas industry be after the war? No doubt the change-over from war production to peace production has already started in a small way, but the transition will be so gradual that many may not recognize it. The government now has complete control over the flow of all raw materials and unquestionably that control will be retained well after the actual war ceases. In the meantime, certain civilian requirements will gradually move from the non-essential to the essential classifications, thus improving their priority basis, and more production will be diverted from war to peace.

Liquefied gas plays a major role in relation to the food and health of the nation and as such must receive early consideration in this transitional period.

The equipment which will at first be available will be essentially that which was being used in 1941. New models of all types of equipment and appliances are in the engineering and research departments of dozens of manufacturers supplying this field. But it will require from one to two years after raw materials are freely available for the production of those new models. Those manufacturers are preparing to invest millions of dollars to make this a greater industry with better products and service.

The liquefied gas industry will be one of the principal benefactors of the vastly increased production of aluminum, plastics and other synthetics. Through their uses, lighter and more efficient appliances, tanks, cylinders and utilization equipment will be developed. All of these will create more economical operations, greater consumer interest and lower consumer costs, and these will lead to real mass acceptance of liquefied gas as a household necessity.

The time when 500,000 **new** customers per year will be served with LP-Gas is in the visible future!



KENNETH R. D. WOLFE
Guest Editor for October

MAINLY BEYOND THE MAINS

By ELLIOTT TAYLOR, Washington Editor

Black Eye

It is too bad that a few refiners in California saw fit to handle the question of a possible butane shortage there in such a way as to throw discredit on the entire LP-Gas industry. Inconsiderate and hasty action in advising dealers and large consumers of gas that the supply would be terminated at an early date has resulted in confusion within the industry that could easily have been avoided. But even worse, it has created consternation among farmers, municipalities, and other essential users of butane in the west, while supplying the electrical industry with a whole portfolio of panic stricken press clippings to use in its relentless smear campaign against LP-Gas.

We are reluctant to believe that one or two producers would be so lacking in their sense of industry responsibility as to want to throw the less profitable, OPA price-frozen, load off on their competitors, leaving them free to sell 100% of their output to the government programs that are exempt from price ceilings. But certainly no informed executive should make the error of thinking that LP-Gas for essential farm and domestic uses would be arbitrarily discontinued just on the basis of his own company's decision in the matter.

Our opinion, stated some months ago, remains unchanged, namely that no producer will be permitted to cut off the supply of butane to his existing contracts, unless some provisions can be made by either the seller or the buyer to obtain supplies from another source. No directives have yet been issued requiring the continuance of service, but they can and will be unless the industry demonstrates its ability and willingness to work out the solution of its own problems.

While the attitude of the PAW has been one of encouraging the changeover from butane to propane where that can reasonably be done, and with a minimum of critical materials, even this has not been actively or vigorously pushed to date. The simple rason is that PAW does not now see indicated any critical shortage of butane supply for the west during the coming winter. They are ten times more concerned over the transportation problem than with the actual amount of LP-

Gas that will be available for existing consumers.

The electrical industry is right now making the most vigorous representations in Washington in its endeavor to be given the first priority on the resumption of peace-time manufacture of appliances. One manufacturer has already made use of the California butane shortage reports in an endeavor to get back into the business of manufacturing peace-time electric ranges.

We read in an electrical magazine that the only thing holding back a "proposed restriction on the sale of butane or 'bottled gas' for farm use" is the question of "just where the cooking equipment would come from to substitute for the butane ranges". This journal helpfully suggests that "maybe the WPB might release some electric ranges or even roasters". Another publication in the same field editorializes on the position of LP-Gas as that of "sitting on the edge of the abyss".

These, of course, are sly distortions of the facts that add up to whopping big lies. There has never been at any time any "proposed restrictions on the sale of butane" for farm use to existing consumers. On the contrary the greatest concern of the LP-Gas section of PAW has been to see that this essential service could be maintained at any cost aside from outright danger to the war program.

The LP-Gas industry can and should repose implicit confidence in both the disposition and the ability of the LP-Gas Section of PAW to safeguard essential industry rights and to abet the continued dispensing of every service that is consistent with the demands of the war.

We believe that for the good of the industry, any further questions of discontinuing service to distributors, dealers or blocks of essential users of butane should be first discussed either with the LP-Gas industry committee for the district, or with Paul Thompson, Chief of the industry branch of PAW, in Washington.

Industry Committees

District chairmen of the LP-Gas industry committees of PAW held their first meeting in Washington the middle of September. Number one accomplishment in our estimation was that the meeting set at rest any misgivings members may have had regarding the position of liquefied petroleum gas in the general administration-through-industry set-up of the PAW.

PAW is continuing to develop and refine the decentralization technique which was instituted some months ago. This simply means that as many matters as possible are being handled through the district offices, without referring them to Washington for decisions.

Organizationally, LP-Gas is a sub-committee under the Natural Gas and Natural Gasoline committee in each district. From a practical working standpoint, we believe that the LP-Gas committeemen will have all of the local authority and industry autonomy that they want or need. Their chief responsibility to the natural gas and natural gasoline chairman will be only to keep him informed of their activities and recommendations.

Transportation was the major topic of discussion, with the likelihood that each chairman will immediately recommend to his district committee a study of the truck facilities in its district. The LP-Gas section of PAW has had to put up a tough fight to retain enough tank cars in butane and propane service to handle the minimum requirements of the industry. The time is not far distant when additional tank cars may have to be taken from gas service. The gap will have to be filled by the maximum and most efficient use of every available tank truck. A real survey of the total truck capacity of the entire industry will be an invaluable aid to the maintenance of deliveries when that time comes.

Conservation Program

The office of War Utilities of the War Production Board is currently sponsoring a broad program of conservation on coal, petroleum products, transportation, gas, electricty, water and communications. Both the manufactured and natural gas industries are cooperating in carrying the story to their consumers, and among the recommendations made there are many, particularly with respect to residentical users that lend themselves to LP-Gas cooperation.

The gas utilities have already embarked on the second year of their conservation through consumer education phase of the program, using their regular advertising media for the purpose. These may include newspaper advertising, radio, bill stuffers, window and office displays, bill board and publicity stories.

The program as addressed to domestic consumers of gas is specific and revolves around the "do" and "don't" technique. Don't use the gas range oven for kitchen heating; don't light top burners until cooking utensils are in place; don't use running hot water for washing dishes or hands; don't leave refrigerator door open; don't overcrowd the refrigerator. Do use a low blue flame; cook whole meals in the oven, one-dish meals on top burners; keep burners clean; economize on hot water; repair leaky faucets; set water heater thermostat at 120° to 140°.

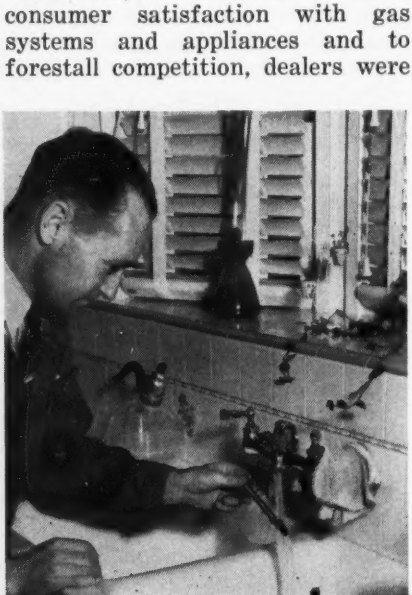
The complete program is available through the offices of Wm. A. Lyons, Chief, Fuel and Allocations Branch, Office of War Utilities, Temporary R Bldg., Washington, D. C.

There's a New Meaning to —

SERVICE

THE word "service" has assumed a new significance to the LP-Gas dealer since the war came to this country to interrupt routine practices.

Formerly, in a desire to build consumer satisfaction with gas systems and appliances and to forestall competition, dealers were inclined to give much free service that could not be maintained when war industries and the armed forces made bids for experienced servicemen.



Service testing thermometer shows if thermostat is adjusted at proper temperature to control heat of water.

Again, government orders restricting the sale of equipment and appliances forced the industry to depend upon its accumulated load and service for which a charge could be made for its two remaining income sources. Immediately it became necessary to instigate two practices not common before—(1) to charge for servicing acts which had often been rendered free of cost to the customer before, and (2) to endeavor to create revenue-earning business by urging users to have their appliances checked for needed repairs, this partly in the interest of prolonging the lives of appliances at this time when replacement is largely impossible.

Thus, service was analyzed as a new source of income rather than a liability or, at best, a break-even obligation of dealer to customer. In that light many dealers began setting up a schedule of prices and a system of developing business that compared in nature to the pre-war sales department. Men canvassed all users, took record of the condition of all appliances, urged users to approve complete servicing and, in short, put service on a business basis — something that, indi-

rectly, could be deposited in the bank, so to speak.

Withal, the dealer had to be honest in fairness to the user and to cooperate with war needs by not installing new parts when repairs would serve the purpose. So, little by little, firms began setting up "service policies" and gave more consideration to making their service departments the sources of continuing profit. For this to be successful the relationships between dealers and customers must be cultivated on a basis of mutual confidence and understanding, and from many companies have come suggestions of how this can best be done. Many of these ideas are presented here for they represent a general policy that has proven well worth while by utilities and individual firms.

Before enumerating points for the service man to remember, it might be worth while to determine what problems he is liable to encounter. These may be divided into the following two classifications, first:

1. Leaks, either in the main (if on a town system) or service piping, meter, customer fuel piping, or appliances.

2. Insufficient gas supply, either a total outage or a poor supply caused possibly by a stoppage in main, service, or customer fuel piping, or lack of vaporization due to cold weather or moisture in the line.

3. Meter trouble, causing poor supply, noise, etc.

Second, service calls pertaining to the customer's appliances:

1. Lighting of pilots on ranges, water heaters, space heaters, heating systems, or refrigerators.

U-gage for testing service pressure often helps to locate cause of customer's complaint by the housewife.

2. Trouble with water heaters or other appliances caused by defective mechanisms, dirty coils, faulty vent installations, fumes from poor combustion, etc.

3. Requests to clean and regulate space heaters and other heating appliances such as floor furnaces, unit heaters, or central heaters.

4. Those due to inadequate house-heating or water-heating capacity.

5. Lack of knowledge in operating appliances.

6. Requests to clean and regulate burners on ranges, stoves, etc.

Now for ways to build your service income and listing the serviceman's "code of ethics and good practices":

1. List your company in the classified section of the phone book under "Gas Appliance Repairs" or "Ranges" or both. Take enough space to command attention.

2. Send out a letter to your complete mailing list, telling of your new and efficient repair service.

3. Set up nominal charges for certain types of service; such as, complete top burner, oven and broiler adjustment service; refinishing of top burners, oven racks, etc. In servicing, when at all possible, repair the damage rather than attempt to replace with new parts. This is to conserve materials—to "Fix It Up and Make It Work."

4. Give prompt and efficient service. Don't fall down on your promises. Some little extra service while your man is on the job can well afford to be done.

5. While he is there, the serviceman should make a survey of the customer's needs for future reference. Sell your future services.

6. Train your men to be tactful and diplomatic.

7. Train your men to be courteous.

8. Be sure to diagnose the complaint correctly, explaining the necessary work to the customer.

9. While working, keep conversation at a minimum.

10. Avoid undesirable discussion with customer.

11. Don't let your men accept gifts or gratuities from customers. Such acceptances breed obligation which leads invariably to embarrassing situations.

12. Tell your men not to discuss unrelated subjects with the customers.

13. Train your men to make no statements that will reflect upon your

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Checking calibration or adjustment of thermostat in gas refrigerator by measuring temperature of bulb.

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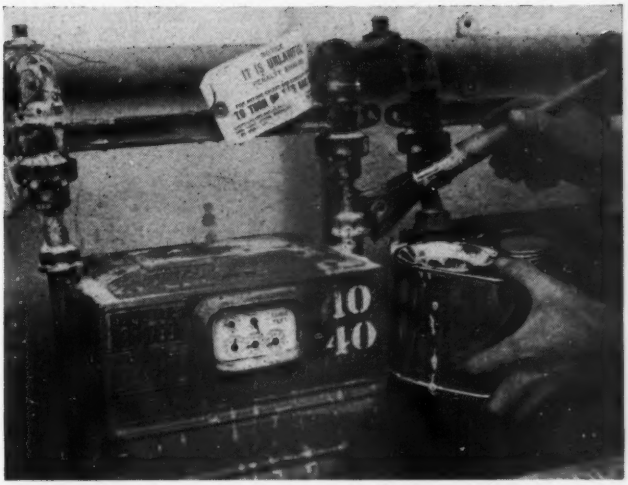

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There is only one good way to look for leaks and that's the safe way. A can of soapsuds and a brush is what you need.

▼

company, your fellow employees or your equipment.

14. Be certain your men are always neat appearing.

15. Be sure the serviceman does not enter the house chewing tobacco, smoking a pipe or cigarettes, or wearing hob nailed shoes.

16. Be certain to instruct him to be careful about where his tools are laid or placed in the customer's house and not to drop them. Insist that your men clean up the kitchen after the job is completed.

17. Before he leaves, the serviceman should explain to the customer what was done so that she is satisfied that her request for service has been completely handled.

18. If serviceman must come back be sure he makes an appointment.

19. Be sure he keeps that appointment.

20. If possible, he should phone first even though he may have an appointment. Maybe the customer forgot. It is his privilege to forget, not yours.

21. He should not cross lawns.

22. He should use walks leading up to the door.

23. He should knock or ring gently.

24. Before leaving he should ask the customer to remind her friends of your service.

25. He should get your repair order signed by the customer indicating that the customer is completely satisfied.

26. You should encourage service work on a C.O.D. basis in every case where there might be the slightest question—in all cases if possible.

27. When service requests come in, ascertain if the customer desires to pay the service man. Don't ask if they want you to bill them. That is negative selling and might prompt them to say, "Yes, send me a bill."

28. Train and work hard with your service personnel, teaching good service habits, selling habits, and good customer relations and careful workmanship.

29. Don't permit service men to chew up fittings with pliers or wrenches.

Teach them to use the correct tools for the various parts that are to be repaired.

30. Good tools mean good service work. Poor tools produce poor work. If work is poor, you cannot hope to expect new customers. Be careful of the property you are repairing even though it may be old.

31. If you are not positive about making a repair and do not know exactly how to do it, find out.

32. Write your various suppliers for repair information. They will be happy to assist and advise you. Take advantage of the services that various manufacturers have to offer.

33. When a repair bill is paid for services rendered, send a thank-you card. Make it as personal as you can. The card costs only a penny.

34. Use direct mail campaigns for soliciting service.

35. Make major repair estimates free.

36. If the service work is of a major nature, take the appliance to your shop and give your customer something to use while the appliance is in for repair.

37. Be complimentary to your customers in every instance. While you may not have appliances to sell for replacements, the service impression you leave will pay dividends later and help your future sales prospects.

Lighting pilots of large gas heating installation similar to those used in apartment houses or commercial establishments.

Serviceman refers to his order slip to check address and reason for call.

38. Be careful that service men don't go on a job with insufficient tools or improper equipment.

39. When a request for service comes in over the phone, get as much information as you can from the customer with reference to the name of the appliance, the type of the appliance, the serial number, or catalog number of the appliance. Save yourself time, money, effort and extra trips by getting as much of the information as you can over the phone.

40. During the service call the service man should explain any new economies that might affect the use and operation of the appliance repaired in the customer's home.

41. If any nearby school is in the process of setting up an appliance repair training school, have all of your men attend classes. Seek guidance and advice when needed.

42. Keep your repair shop well organized and fully equipped to do good repair work.

43. Keep your store appearance up. Your customer is impressed by the quality of your service, by the way you keep house. Slovenly housekeeping generally means slovenly service. Keep your store room and parts stock in good order.

44. Sell the neighborhood service idea and remember that you are in the business of "Fixing 'Em Up and Making 'Em Work."

45. Identify your business as being an authorized gas appliance service.

46. Use the "before and after" idea in window displays to sell your repair service.

47. Before attempting repair, carefully diagnose nature of complaint according to prearranged method.

48. If you have a home service department, follow through with it.

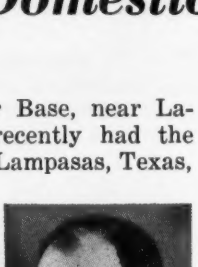
49. Suggest to your customer that she stop in and get up-to-date information on nutrition to help in further economizing.

50. Train your female help to become conversant on problems pertaining to food.

Specially Designed System Does Domestic Job for Army

By O. D. HALL

THE Army Air Base, near Laredo, Texas, recently had the Hydro Gas Co., of Lampasas, Texas, install a large LP-Gas system for the ground range. This air base is located 16 miles beyond the nearest natural gas mains, which necessitated the use of liquefied petroleum gas, and it is in such a lonely spot that the hammering of the workmen found its echo in the howling of roving coyotes, seemingly indignant at the invasion of their domain.



M. E. McKAY

The new system, which was completed June 15, and is designed to carry a load in excess of 2,400,000 Btu. per hour, serves principally the mess hall, but also extends to the student gunners' quarters. It furnishes fuel and equipment for serving a maximum of 600 meals, and, in addition, is used for hot water heating. Twelve heavy duty 2100-gal. restaurant storage-type, automatic gas water heaters furnish an abundance of hot water for all purposes at the base.

Collaborating with San Antonio Army District Engineer, Major Monier, special features of the plant were designed by W. L. Powell, Southern Steel Co., and M. E. McKay, owner and manager of the Hydro Gas Co.

Mr. McKay stated that in order to guarantee sufficient vaporization in face of maximum gas demand and low outside temperatures, this system was equipped with "pressurestat," a centrifugal pump with capacity of 4 gals. per minute, and a ¼ hp. electric motor to pump water through the vaporizer when and if the container pressure should fall to 15 lbs, per sq. in., the pump to cut out at 43 lbs. per sq. in. He said that the installation was unique in that never before in his experience in the LP-Gas business had he run an electric line to a Hydro Gas system. Gas pressure on the pressurestat is cushioned by light oil to give further assurance of safety and long life to the diaphragm of the pressurestat.

Initial fueling was supplied by C. H. Lacey, Pittsburg Water Heater Co., Dallas, Texas. Supervising engineer of the installations was Captain Kirk, and Inspector Lawrence of the Post Army Engineers, Laredo, handled the inspections.

A 2228-gal. (water capacity) LP-Gas container, equipped with Bas-

tian-Blessing controls and Southern Steel Co.'s water vaporizer and revaporizer, was installed by the H. B. Zachry Co. A 3-in. gas main was laid from the container to the principal building served. This line was equipped with a Merco Nordstrom cut-off valve. The piping and vales were furnished by the San Antonio Machine and Supply Co., San Antonio. The Laredo Plumbing Supply and Tin Shop also assisted Mr. McKay in installing the army base LP-Gas system. All equipment at the base is listed as standard by the Underwriters' Laboratories, Chicago.

Mr. McKay, who several years ago was chairman of the Southern Section, Liquefied Petroleum Gas Association, and a member of its first board of directors, was president and general manager of the Hydro Gas Co. of San Antonio, before he acquired his present company at Lampasas. Other recent installations made by him include systems for the United Service organizations at Lampasas and Killeen, Texas, and for Panther Park, a mammoth recreational center serving principally the tank destroyer unit of Camp Hood, largest army post in Texas.

◆ ◆

Plumbing, Heating Repairs Raised to AA-5 From A-10

The preference rating assigned for repair and replacement of plumbing and heating equipment was raised to AA-5 from A-10 Aug. 21 by the WPB to bring this rating in line with ratings assigned for needs of similar importance. The order is PRO P-84.

WPB now requires a certification of need by the ultimate consumer for purchase of plumbing and heating equipment or parts costing over $5. Any person making sales of items costing less than $5 may use the AA-5 rating to replace his stock. Under the amended order the AA-5 rating may be used by a consumer to purchase parts or equipment (other than stokers) to convert oil-burning or gas-burning equipment to solid fuel burning equipment.

By issuance of a supplementary order, orders for plumbing and heating repair and replacement equipment may be rerated from A-10 to AA-5 without notice or certification from the customer. The rerating procedure established by Priorities Regulation 12 requiring the person placing the order to advise his supplier that his order was to be rerated, would have caused unnecessary paper work and much delay in time for suppliers.

◆ ◆

A-10 Rating is Lowest For Plumbing, Heating Equipment

General Limitation Order L-79, as amended Aug. 21 is a revised WPB order which restricts sale or delivery of plumbing or heating equipment, as defined in the order, from the manufacturing level down to the ultimate consumer except on an A-10 or higher rating.

The order also extends restrictions to cover all except non-metallic plumbing and heating equipment which cost the purchaser less than $5 from the restriction.

POSTAL ZONE NUMBERS IMPORTANT

Our new postal zone number is 14. What is yours?
Send it to us for our circulation records. It should appear upon all of your stationary to speed up mail deliveries as much as 24 hours.
Remember—this is a permanent system.

War Effort Will Be Aided By Fire Prevention Week, Oct. 3 to 9

IN an effort to reduce fire risks through the medium of Fire Prevention Week, handlers of all fuels will join with the National Fire Protection Association, the Safety Research Institute, Inc., and the National Safety Council Oct. 3-9 in its intensive nation-wide program to awaken the general public to the seriousness of the loss of life and property by fire in the United States and Canada.

L. W. HUTCHINS
Director,
Safety Research
Institute, Inc.,
New York

Education of every citizen in fire prevention, with emphasis on the vital need to conserve manpower and production for the war effort, will be part of the united program of each organization.

NFPA has published a pamphlet entitled "Facts About Fire" which presents valuable data.

In a comparative study, showing gas and gas appliances at the bottom of the list, some of the major causes for annual fire losses are given in Table 1.

Fires caused by unknown causes totaled 62,000 in number and caused losses of 136,000,000.

A fire protection policy has been established by the War Production Board to provide fire extinguishing equipment for the nation's most essential resources. In order to insure the best possible use of the limited quantity of materials and equipment which can be spared for this purpose, only those resources will receive protection which have first proved their urgency by securing A ratings from the Resources Protection Board.

Table 1. Causes of Fires and Total Losses in 1941

	No. of Fires	*Loss*
1. Electrical	62,000	$23,300,000
2. Smoking	125,000	16,750,000
3. Spontaneous ignition.	18,500	16,000,000
4. Defective or overheated heaters	46,000	14,250,000
5. Open lights, flames, sparks	22,000	11,500,000
6. Chimneys, flues, defective or overheated..	50,000	11,400,000
7. Sparks on roofs.....	60,000	9,500,000
8. Lightning	40,000	9,500,000
9. Exposure	22,000	9,500,000
10. Flammable liquids, misc., home dry cleaning and starting fire	24,000	9,100,000
11. Incendiary, suspicious	5,500	7,250,000
12. Miscellaneous	28,000	6,750,000
13. Lamps and stoves....	20,000	6,000,000
14. Grease, tar, etc.....	15,000	5,700,000
15. Oil burners	12,000	5,000,000
16. Explosions	14,000	4,500,000
17. Torches, welding.....	6,000	4,500,000
18. Children and matches	22,000	3,500,000
19. Matches	10,000	2,500,000
20. Electrical appliances, motors	15,000	2,300,000
21. Hot ashes, coals.....	15,000	2,250,000
22. Combustibles near heaters	9,000	2,100,000
23. Sparks from machinery, friction	2,000	2,000,000
24. Rubbish	23,000	1,600,000
25. Gas and appliances..	3,500	1,250,000

▲

If YOU smell gas at home, look the situation over—but not with matches.

If much gas is leaking, shut it off at the meter. (Now is a good time, incidentally, for you to find out where the gas shut-off is in your house, so you'll be prepared if a leak ever occurs.)

It is best to call the gas company at once to make the repairs, but if you want to find the leak and take care of it yourself, proceed correctly.

Mix soap and water and brush it over the joints and pipes where you think the leak may be. The leaking gas will make bubbles. This is the way gas service men spot leaks. It is the best and safest way.

▼

Demonstrating high pressure liquid fire being controlled by fog nozzle system.

Order P-98-e Gives Industry Consumer Repairs, Material

INDIVIDUALS who own or rent equipment for handling petroleum products for their own private use are granted a preference rating of AA-5 and a Controlled Materials Allotment symbol of MRO-P-98-e for the purpose of maintaining or repairing worn-out parts of such equipment, under the terms of Preference Rating Order P-98-e issued by the War Production Board, and effective Sept. 2.

Petroleum Administration for War officials, to whom administration of the order has been delegated by the WPB, explained that thousands of individuals owned or rented equipment for handling petroleum products for their own personal or business use but not for resale.

The new Order provides a method for using preference ratings and Controlled Materials Allotments to get materials and repair parts to keep equipment in good working order.

Commenting upon P-98-e, Paul K. Thompson, Chief, Liquefied Petroleum Gas Section, Natural Gas and Natural Gasoline Division of PAW, has written BUTANE-PROPANE *News* as follows:

"This preference rating order now provides a method by which the liquefied petroleum gas industry may obtain certain repair and maintenance material to be used for the upkeep or repair of liquefied petroleum gas equipment used by consumer accounts. It also grants a preference rating and allotment symbol to the individual consumer, thus making it possible for consumers who must repair their own equipment to obtain material for repair and maintenance.

"We believe it important to call the attention of the liquefied petroleum gas industry to paragraph (d) of the order, a portion of which reads as follows: 'However, maintenance and repair does not include the restoration or replacement of any . . . complete storage tank or cylinder, regardless of the capacity, used for storing liquefied petroleum gas.'

"The MRO requirements of the liquefied petroleum gas industry are now provided for by two orders: P-98-b, which grants preference ratings and an allotment symbol for the repair and maintenance of liquefied petroleum gas equipment other than that used by consumer accounts, and P-98-e, for repair and maintenance material necessary for equipment used by consumer accounts."

◆ ◆

Production Operations Aided by P-98-b

PRO P-98-b, under which the petroleum industry secures priorities assistance in obtaining materials, was amended Aug. 9 in two important respects.

1. Production operators are authorized to use a Preference Rating of AA-2X in obtaining materials (other than maintenance repair and operating materials) for production operations.

2. It is no longer necessary for any petroleum operator, regardless of which branch of the industry is concerned, to place both a preference rating and an allotment number on delivery orders.

Prominent LP-Gas Men Named On PAW District Committees

COMMITTEES made up of men widely known in the LP-Gas industry and chosen from all sections of the country have been appointed by the Petroleum Administration for War to serve in an advisory capacity concerning all matters affecting liquefied petroleum gas suppliers, distributors and dealers.

The United States has been arbitrarily divided into five districts. Every district has its committee which will meet to consider industry problems and to record needs, hear petitions and complaints, make surveys, and familiarize itself with local situations.

Upon call, the chairmen of these committees will meet in Washington, D. C., with the PAW, conveying reports of conditions in their respective districts and supplying information which will better enable the PAW and WPB to frame industry orders.

The personnel of the committees is as follows:

District 1—Atlantic Seaboard.

W. A. Naumer, chairman, Carbide & Carbon Chemicals Corp., New York.

John Clark, Standard Oil Co. of N. J., New York.

P. A. Anderson, Utilities Distributors, Inc., Portland, Maine.

K. H. Koach, Green's Fuel, Inc., Sarasota, Fla.

C. D. Whitfield, Phillips Petroleum Co., New York.

Mark Anton, Suburban Gas Co. of N. J., Livingston, N. J.

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District 2—Central States.

G. R. Benz, chairman, Phillips Petroleum Co., Bartlesville, Okla.

Chas. O. Russell, Thermogas Co., Inc., Des Moines, Iowa.

F. B. Boice, Shell Oil Co., Inc., Chicago.

G. W. Bach, Skelly Oil Co., Tulsa, Okla.

John L. Locke, Northwestern Blaugas Co., St. Paul.

Ross Roberts, Carbide & Carbon Chemicals Corp.

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District 3—South, Alabama to New Mexico, inclusive.

L. Abramson, Jr., chairman, Petrolane Gas Corp., New Orleans.

G. L. Brennan, Warren Petroleum Corp., Tulsa, Okla.

J. Woodward Martin, Lone Star Gas Co., Dallas, Texas.

T. A. Sacra, Sacra Bros., Clovis, New Mexico.

B. T. Harris, Butane Gas Co., Little Rock, Ark.

W. A. Baden, Anchor Petroleum Co., Tulsa, Okla.

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District 4—Rocky Mountain States.

Dr. R. W. Leslie, chairman, Wasatch Oil Refining Co., Salt Lake City, Utah.

H. H. Torbet, Union Oil Co., Pueblo, Colo.

P. H. Anderson, Skelly Oil Co., Denver, Colo.

S. J. Connelly, Glacier Production Co., Butte, Mont.

C. R. Hustead, Denver Propane Co., Denver.

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District 5—Pacific Coast, Arizona, Nevada.

D. D. Purrington, chairman, Standard Oil Co. of California, San Francisco.

W. T. Joplin, Butane Corp., Phoenix, Ariz.

C. M. Ambrose, Liquefied Gas Corp., Seattle.

D. J. Tadish, Shell Oil Co., San Francisco.

Tallent Ransome, Ransome Co., Oakland, Calif.

P. S. Magruder, General Petroleum Corp., Los Angeles.

P. E. Foote, Liquefied Petroleum Gas Corp., Long Beach, Calif.

Word was received that Mr. Purrington would not be able to serve as District 5 chairman and that Mr. Magruder would be appointed in his place.

NORMAL BUTANE

By R. C. ALDEN
Phillips Petroleum Company, Research Department, Bartlesville, Oklahoma

AT this time*, with isobutane so much in the forefront, some explanation should be given for choosing to discuss normal butane. With the advent of butane isomerization processes isobutane and normal butane are becoming almost synonymous. If, as some seem to think, there is to be a shortage of isobutane, attention must then be focused on normal butane. It is of further significance to note that the tremendous refinery uses of C_4 hydrocarbons is bringing about a definite problem in motor fuel volatility. Propane as a substitute for butane in motor fuel is under serious consideration in many places. All of these trends provide incentives for natural gasoline manufacturers to increase C_4 extraction at natural gasoline plants. Normal butane may become as important as isobutane has already become.

Referring to the processes for the manufacture of aviation gasoline from light hydrocarbons it is characteristic of them that a large portion of their investment and critical material usage is for the fractionation of the light hydrocarbons. The deisobutanizer, or "butane splitter," is a substantial part of the investment in butane isomerization plants, in alkylation plants and in codimer plants. Thus, any natural gasoline manufacturer who is seriously considering a "butane splitter" for the segregation of field isobutane should also study the amplification of his project to include at least butane isomerization and perhaps alkylate or codimer production.

To illustrate the point made in the preceding paragraph, simplified flow diagrams of four process arrangements are shown in Fig. 1. In each case, C_4 and lighter from natural gasoline is the entire feed to the system.

In these four diagrams each succeeding one is identical to its predecessor except for the addition of one or more operations. The sizes of the various units, of course, will depend on the successive operations.

Operation Segregates Feed

In Fig. 1 the solid flow lines represent the simple case of the segregation of isobutane from natural gasoline C_4's and lighter. Equipment requirements are a "butane splitter" and a depropanizer. The

* **Tremendous demands for liquefied petroleum gases to advance the war effort open opportunities to manufacturers of natural gasoline to increase deliveries of normal butane and isobutane as relatively pure materials or as mixed butanes or in natural gasolines to refineries which are prepared to convert them into 100-octane gasoline or synthetic rubber. The accompanying article, "Normal Butane," was presented before the recent convention in Dallas, Texas, of the Natural Gasoline Association of America.—Editor.**

operation segregates the feed into three streams: isobutane, normal butane and propane and lighter.

The dashed flow lines in Fig. 1 represent the flow diagram for the addition of a butane isomerization unit to the system previously described. To the equipment has been added an isomerization unit to which is fed normal butane from the "butane splitter" and whose output is added to the feed of the "butane splitter." Obviously, the columns will have to be increased in size, but the fractionation steps are the same. In this operation two products are made, isobutane and propane and lighter.

It is a rare thing for an adequate olefin bearing stream to be available to a field natural gasoline situation. The crossed flow lines in Fig. 1 represent the addition of an isobutane cracker to the equipment already provided. All or a portion of the isobutane from the depropanizer is fed to the isobutane cracker. In the cracker the isobutane is cracked to a depth of 20% to 30%. The C_3-C_4 content of the cracked gas is ideal for feed to a codimer plant or mixed with uncracked isobutane is ideal feed for an alkylation unit. In the event neither of these units is installed the product should be of interest to refiners with alkylation or codimer facilities.

As a final step, the circle lines in Fig. 1 show flow for the addition of an alkylation or codimer unit. In the case of a codimer unit all the isobutane from the depropanizer would be charged to the isobutane cracker. In the case of an alkylation unit only a portion

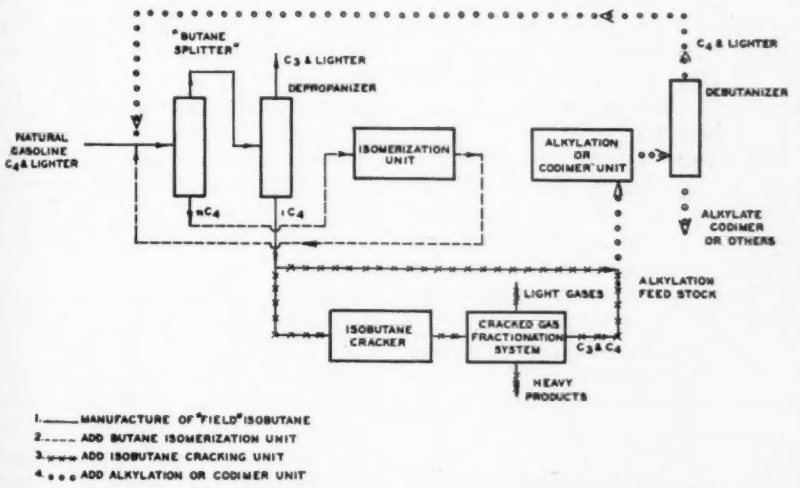

Fig. 1. Aviation gasoline products in a natural gasoline situation.

goes to the isobutane cracker. The effluent of the conversion unit passes to a debutanizer whose kettle product is the alkylate or codimer. The overhead C_4's and lighter is fed to the "butane splitter" (or to the depropanizer or to the conversion unit feed or to any combination of these three).

Of particular interest in this sequence of flow diagrams is that portion of Fig. 1 which shows the isobutane cracker since this provides an olefin bearing stream for subsequent conversion operations. The flow diagram for this operation together with the flow for the codimer plant is shown in somewhat greater detail in Fig. 2.

Phillips' Plant Five Years Old

Phillips Petroleum Co. has had in operation for five years a plant in which isobutane is thermally cracked to produce propylene and isobutylene. The cracking unit consists of a gas fired furnace containing an all-welded coil of 4 in. OD by 3½ in. ID 18-8 chrome nickel alloy tubing having an aggregate length of 2511 ft.

Operating temperatures have been in the range 1200° F. to 1350°F.; usual flow rates have been from 75,000 to 125,000 gal. of isobutane per day; and pressures have been in the range of 60 to 80 lbs. per sq. in. gage.

Conversion of isobutane per pass through the cracking coil has been approximately 25%. Ultimate yield of isobutylene per 100 lbs. of isobutane destroyed has been about 50 lbs. In addition about 25 lbs. of propylene have been obtained, making the total yield of useful olefins 75 lbs. per 100 lbs. of isobutane cracked. A considerable quantity of hydrogen is also produced.

The isobutane cracker is simple in design and operation, and requires a relatively small amount of critical materials for its construction.

Best if Isobutane is Pure

For most efficient operation, the isobutane used for olefin production should be pure. However, the presence of normal butane and lighter hydrocarbons in an aggregate amount of the order of 10% or less will not seriously affect the cracking operation.

Normal butane is the hydrocarbon most likely to occur as an impurity. Since normal butane is somewhat less stable than isobutane, it is decomposed to a greater extent than is isobutane in a given time at a fixed temperature. The decomposition products of normal butane are principally hydrogen, methane, ethylene and propylene. Only about 12% of the normal butane cracked reacts to form normal butylenes. In most present applications, butylenes are more useful than propylene or ethylene. Consequently, normal butane should be kept at as low a concentration as possible.

Propane cracks to form principally propylene, ethylene, methane and hydrogen. It is much less reactive than the butanes, and acts substantially as a diluent when present in small amounts in isobutane being cracked. Since ethane and methane are even less reactive than propane, they, also, may be considered as diluents of the iso-

butane if they are present in small amounts. The principal objection to propane, ethane and methane as impurities in cracker feed isobutane is that they increase the size of the cracking and separation equipment without yielding compensating amounts of useful products.

Pentanes plus heavier compounds should not be permitted in the cracker feed isobutane in a concentration greater than 1% or 2%. These heavier compounds crack much more readily than butane and lighter hydrocarbons, and some of their decomposition products tend to degrade rapidly into tars and coke.

Olefins in the cracker feed isobutane will crack to yield olefins of lower molecular weight and other products. They will also polymerize thermally, but this reaction is affected by the concentration of the olefins. Butylene may be present in the isobutane to the extent of about 2% without noticeably increasing the coke and tar formation. Propylene and ethylene can be tolerated in somewhat larger percentage because of their greater stability.

If sulfur compounds are present in the cracker feed isobutane they will crack and undergo reactions similar to those of hydrocarbons. Sulfur will consequently be found in the olefinic products. Since most applications of isobutylene and propylene require them to be sub-

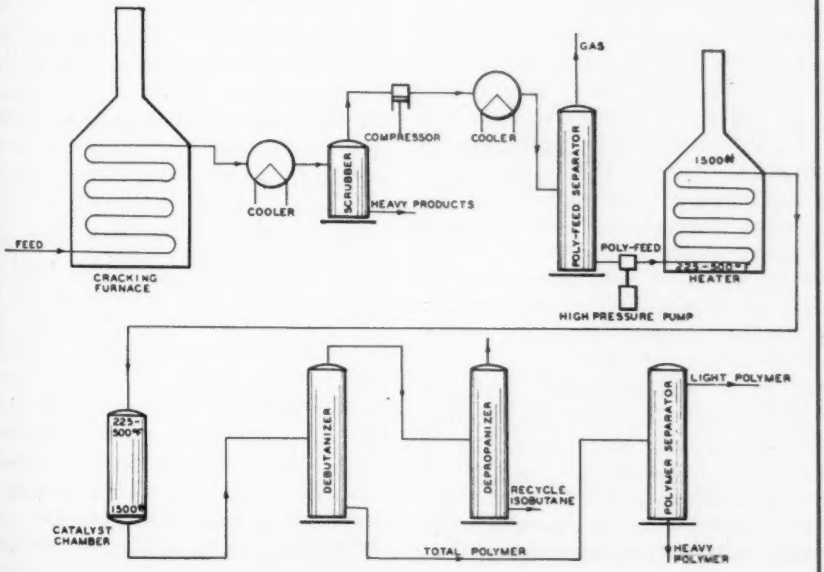

Fig. 2. Phillips catalytic polymerization process.

stantially free of sulfur compounds, it will usually be found desirable to free isobutane of sulfur compounds before using it for cracking stock.

Table I shows typical feed and product compositions for the isobutane cracker, when operating in conjunction with a polymerization (or codimer) unit. The composition of the product C_3 and C_4 is suitable for charging to a polymerization (or codimer) unit as shown in Fig. 1 and in some detail in Fig. 2. With uncracked isobutane added, the product C_3 and C_4 is ideal as a feed stock to an alkylation unit as shown in Fig. 1.

Post-War Considerations

It is of importance to consider the post-war possibilities of going the extreme route on the flow diagram shown in Fig. 1 where isomerization, isobutane cracking and alkylation are put into practice, assuming that butanes extraction has been raised to well above 90% and all the butanes are processed to produce alkylate. Under these circumstances it is estimated that the blend of butane-free natural gasoline and alkylate would have a Reid vapor pressure well under 10 lbs. and an ASTM octane number unleaded of about 80. If in the course of developing the full war time potential of the situation, facilities were installed for the segregation of normal and isopentane, means would be at hand for controlling vapor pressure and antiknock characteristics over a considerable range. It is therefore evident that these newer operations provide a means either now or in the future for the natural gasoline manufacturer to become a motor fuel manufacturer.

There are, of course, many other process possibilities for the natural gasoline hydrocarbons. The writer has presented the most simple ones partly to simplify the matter but more importantly because the things here discussed are almost entirely covered in pre-Pearl Harbor literature and in issued patents. Nevertheless, the comparatively simple processes described here serve to illustrate the new importance of normal butane.

What is Necessary Now

It should be stated that there is not an easy road to the war time installation of such process steps in natural gasoline situations. Of paramount importance to the war effort is the accomplishment of the necessary results with the minimum expenditure of critical materials, transportation, time and manpower. Basically the problem is to find adequate supplies of isobutane and olefins to manufacture the required quantities of alkylate. Olefins can often be made in increased quantities by revising refinery operations. Normal butane for isomerization is abundantly available at refineries. Where conversion facilities already exist there are many possibilities of raising production by the elimination of bottlenecks. All of these things must be taken into account before "ground-up" proposals receive consideration.

On the other hand, the writer has seen each successive estimate of the requirements for aviation

TABLE I

Isobutane Cracking Operating Conditions and Products

(Furnace with Two Parallel Coils)

Total isobutane feed (gals. per day)	123,000
Pressure at inlet (lbs. per sq. in. gage)	97
Pressure at outlet (lbs. per sq. in. gage)	26
Temperatures °F.:	
Furnace inlet (after heat exchange)	600
Outlet of convection sections	890
Outlet of radiant sections	1,350
Feed compositions, weight per cent:	
C_3H_6 and lighter	1.11
C_3H_8	1.33
iC_4H_8 (+nC_4H_8)	1.28
iC_4H_{10} (+nC_4H_{10})	95.74
C_5+	0.54
	100.00
Product composition, weight per cent:	
H_2	0.40
CH_4	4.64
C_2	0.95
C_2H_6	8.57
C_3H_6	1.83
iC_4H_8 (+nC_4H_8)	13.83
iC_4H_{10} (+nC_4H_{10})	68.61
C_5+	1.17
	100.00
Per cent isobutane cracked per pass	28
Ultimate yields:	
Pounds iC_4H_8 per 100 lbs. C_4 feed	49
Pounds C_3H_6 (net) per 100 lbs. C_4 feed	26
Total useful products per 100 lbs. C_4 feed	75

gasoline higher than its predecessor. There has been no recession. It is probable that as long as the war lasts the requirements will continue to increase. To be forehanded, natural gasoline manufacturers should be developing projects for consideration by government agencies. In the meantime no greater service to the war effort can be performed than to take every step to increase deliveries of normal butane and isobutane as relatively pure materials or as mixed butanes or in natural gasoline to refineries that have facilities for converting these materials to 100-octane gasoline or to synthetic rubber.

Pacific Coast Section Will Elect Officers in November

New officers for the Pacific Coast Section, Liquefied Petroleum Gas Association, are scheduled to be announced at a forthcoming fall meeting, the date tentatively set for Nov. 12 in San Francisco.

A. N. KERR

This announcement comes from the present chairman, W. T. Joplin, president of the Butane Corp., Phoenix, Ariz., who has served since March 13, 1942.

In accordance with the by-laws of the association, Mr. Joplin has appointed a nominating committee which, after a survey of the available men in the West, will make selections to be voted upon by members on written ballots to be sent out by Secretary Frank M. Taylor. The installation of the new officers will occur at the November meeting. Members of the nominating committee are, A. N. Kerr, Imperial Gas Co., 3625 So. Flower St., Los Angeles, chairman; J. W. McMillan, Jr., American Pipe & Steel Corp., Alhambra, Calif.; W. J. Lambert, Day & Night Water Heater Co., Ltd., Monrovia, Calif., and Harold W. Smith, American Liquid Gas Corp., 1109 Santa Fe Ave., Los Angeles.

Mr. Joplin's purpose in selecting his committee from the Los Angeles area was to enable them to confer and hold meetings without the necessity of traveling considerable distances. He urges that members immediately send to any members of the nominating committee their suggestions for new officers.

THE BOTTLED GAS MANUAL

Chapter 21

Part 2

Competing With Electricity

• **Part I of Chapter 21 of the Bottled Gas Manual appeared in the September issue of Butane-Propane News, Page 21. Questions and answers for both parts are given this month.**

—Editor.

Why Large Storage, Small Input Heaters Are Installed. One would naturally expect that the heat input of such heaters would be relatively large because of their intermittent operation, but another problem confronts the power companies which makes this logical recommendation inadvisable from their standpoint. It will be noted from the Federal Power Commission's reports that where water heating is handled by electricity the energy consumption for this one purpose is equal to that for all other purposes in the home. If by some combination of conditions the entire connected load should be in demand at one time there would be a very heavy load upon the service and feeder lines from the house back to the transformer. This might necessitate the running of heavier lines, and as the expense of this would fall upon the power company they don't want to see this happen. With their customary largesse they pass this expense on to the customer by selling him a small input water heater of large storage capacity. Needless to say, this isn't the proper way to handle the situation from anybody's standpoint excepting that of the power company.

In order to understand how the customer's best interests are disregarded by such a policy, let us consider the analysis in Table 1 of gas and electric water heaters built by one prominent manufacturer. Note how definitely superior in flexibility the 20-gallon gas water heater is, then compare its list price with that of the electric water heater! Note the Filled Weights of 342 lbs. as against 1071 lbs. This explains why the electric water heater is so often found in the basement. Note the Empty Weights of 175 lbs. as against 510 lbs., and the two diameters of 20 in. and 28 in. and judge which heater would be the easier to install. Compare the recovery of 292.8 gals. of 100° water for the electric water heater as against 604.8 gals. for the gas water heater in 24 hours. Which heater would you pick, if you had your choice?

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• **The Bottled Gas Manual series by C. C. Turner, started in the July, 1941, issue of BUTANE-PROPANE *News* and will continue to be published monthly in chapter form until completed. This series constitutes a valuable text book and field manual that should be invaluable to everyone in the liquefied petroleum gas industry.—*Editor.***

Relative Merits, from the Construction and Service Angles. Both water heaters have storage tanks, insulation, and thermostats, so on this score they may be equal, although the electric contacts necessary in an electric water heater are apt to give more trouble than the ground joint seat in the controlling unit of a gas water heater. Electric contacts have a habit of pitting, whereas the highly purified propane gas has no effect upon ground seats. Both heaters have a heating unit, and here is where the road parts. A gas burner has those attributes of deity, being the same yesterday, today, and forever, Amen! Electric units have an unhappy practice of *burning out*, and a replacement unit may easily cost the customer much more than a month's energy bill. There is no repairing of the immersion electric unit in the field by inexperienced hands, and the customer must wait for a replacement unit to be supplied by the distributor or come through from the factory On the other hand, a mechanic of average intelligence can always circumnavigate immediate suspension of gas water heating service by use of a little of the gray matter known as *brain.* Continued ability to function under adverse conditions is certainly in favor of the propane-fired water heater.

Relative Merits from the Engineering Standpoint. Back in our chapters upon water heating we mentioned the inadvisability of heating and storing unnecessarily large quantities of water. In spite of all that we can do, heat will seek its surrounding temperature level, and in spite of the best known and most expensive insulations, some of

TABLE 1. COMPARISON OF GAS AND ELECTRIC WATER HEATERS.

Comparative Headings	*20-Gal. Gas Water Heater*	*66-Gal. Electric Water Heater*	*30-Gal. Gas Water Heater*
Storage capacity, gallons	20	66	30
Input, B.t.u. per hour	21,000	10,236	22,000
Recovery per hour in gallons of 100° rise water	25.2	12.2	26.4
Maximum number gallons hot water draw, first hour	45.2	78.2	56.4
Maximum number gallons hot water draw, 2 consecutive hours	70.4	90.4	82.8
Total possible recovery, 24 hours, 100° rise water	604.8	292.8	683.6
Hours required to heat tank capacity, 100° rise	0.79	5.40	1.13
Over-all diameter, inches	20	28	22
Weight, empty, pounds	175	510	200
Weight filled, pounds	342	1071	450
List price, with copper tank	$108.70	$211.50	$139.50

it will escape from us. The reason for the great weight of electric water heaters is the necessity of preserving precious and expensive heat units. The acme of engineering perfection would be to immediately apply energy to effective service at its source. If the demands are beyond the ability of the source to supply, then storage of energy at low demand points is necessary. Storage of energy necessarily involves losses by leakage.

From the engineer's standpoint, how much better it is to have a responsive unit which can supply energy in any amount demanded at any time, than to have this problem of storage and its losses involved! The gas water heater can fill the bill in this respect. The electric water heater could, if matters of capital investment were not involved, and the electric boys are wise enough to recognize this; hence, their recommendation of large storage, small input heaters. There are those who still dwell upon the present and future of an electrified America, but this question bothers them: *Where* are your electric railroads and electric automobiles? Why hasn't the electrification of American railroads proceeded beyond the demands of the public for smoke abatement? The answer is that the application of electric energy to our domestic needs has not yet become economically profitable!

Relative Merits from the Economic Standpoint. What I now have to say does not only apply to water heating, but to the other services which we can supply as well. This matter of energy rates boils down to a few fundamentals, which I will mention:

1. What does each energy unit cost delivered to the distributor?
2. What does it cost the distributor to handle it?
3. What should the distributor's profit be?

Of course, if you combine the services of manufacturing and distributing you can cover the sins of omission in one by those of commission in the other. If you add to this a merchandising profit for the appliances essential to your business you've got a third way of covering up. If you have got a way of making the customer pay for a capital investment, then issue stock against it, you've got another way of raising money.

Up in a northern New England state we had a shining example of this. A certain company collected from some of its anxious-for-service customers $1200 for the extension of a line. During that year the company didn't lay out a nickel for plant improvement or facility extensions; the customers on that extension line paid for it, yet at the end of the year that $1200 showed up as a physical asset of the company and stock was issued against it!

Who contributed this $1200 to the company? The over-anxious customers did! Who planked another $1200 into the company in the way of stock investment against its physical assets? The buyers of stock in that company did!

In spite of the fact that the electric competition which you have to

face is operating with a degree of "moral turpitude," I think that every propane distributor in the United States can operate competitively, make money, and survive. In view of this conviction on my part I have prepared the charts designated as Tables 2, 3, and 4. Of course, if you are the type merchandiser that doesn't believe in giving quantity discounts, then these tables will not be of any interest to you. But you won't build up much of a gas load in any other manner. Let us examine Table 2 to see how a "dual usage" schedule

TABLE 2. SHOWING HOW THE ESTABLISHMENT OF DUAL USAGE RATES MAKES COMPETITION WITH LOW ELECTRIC RATES POSSIBLE

Dual Usage Rate Per Pound of Propane	*Total Number of Pounds of Propane Used in Month*	*Total Monthly Bill*	*Price Per Pound—Cooking Only*											
			12c Per Pound				*11c Per Pound*				*10c Per Pound*			
			Number of Pounds Propane Used Per Month For Cooking Only											
			30	35	40	50	30	35	40	50	30	35	40	50
			Monthly Cooking Bill—In Dollars											
			3.60	4.20	4.80	6.00	3.30	3.85	4.40	5.50	3.00	3.50	4.00	5.00
			Actual Price In Cents Per Lb. for Propane Used for Other Purposes											
8c	60	4.80	4.00	2.40	0.00	*	5.00	3.80	2.00	*	6.00	5.20	4.00	*
	65	5.20	4.57	3.33	1.60	*	5.42	4.50	3.20	*	6,28	5.66	4.80	1.33
	70	5.60	5.00	4.00	2.66	*	5.75	5.00	4.00	0.50	6.50	6.00	5.33	3.00
	80	6.40	5.60	4.88	4.00	1.33	6.20	5.66	5.00	3.00	6.80	6.44	6.00	4.66
	90	7.20	6.00	5.45	4.80	3.00	6.50	6.09	5.60	4.25	7.00	6.72	6.40	5.50
	95	7.60	6.15	5.66	5.09	3.55	6.61	6.25	5.81	4.66	7.07	6.83	6.54	5.77
	100	8.00	6.28	5.84	5.33	4.00	6.71	6.38	6.00	5.00	7.14	6.92	6.66	6.00
7c	60	4.20	2.00	0.00	*	*	3.00	1.40	*	*	4.00	2.80	1.00	*
	65	4.55	3.00	1.16	*	*	3.57	2.33	0.60	*	4.42	3.50	2.20	*
	70	4.90	3.50	2.00	0.33	*	4.00	3.00	1.66	*	4.75	4.00	3.00	*
	80	5.60	4.20	3.11	2.00	*	4.60	3.88	3.00	0.33	5.20	4.66	4.00	2.00
	90	6.30	4.66	3.81	3.00	0.75	5.00	4.45	3.80	2.00	5.50	5.09	4.60	3.25
	95	6.65	4.84	4.08	3.36	1.44	5.15	4.66	4.09	2.55	5.61	5.25	4.81	3.66
	100	7.00	4.85	4.30	3.66	2.00	5.29	4.84	4.33	3.00	5.71	5.38	5.00	4.00
6c	60	3.60	0.00	*	*	*	1.00	*	*	*	2.00	0.40	*	*
	65	3.90	0.85	*	*	*	1.71	0.16	*	*	2.57	1.33	*	*
	70	4.20	1.50	0.00	*	*	2.25	1.00	*	*	3.00	2.00	0.66	*
	80	4.80	2.40	1.33	0.00	*	3.00	2.11	1.00	*	3.60	2.88	2.00	*
	90	5.40	3.00	2.18	1.20	*	3.50	2.81	2.00	*	4.00	3.45	2.80	1.00
	95	5.70	3.23	2.50	1.63	*	3.69	3.08	2.36	0.44	4.15	3.66	3.09	1.55
	100	6 00	3.42	2.76	2.00	0.00	3.85	3.30	2.66	1.00	4.28	3.84	3.33	2.00
5c	60	3.00	*	*	*	*	*	*	*	*	0.00	*	*	*
	65	3.25	*	*	*	*	*	*	*	*	0.71	*	*	*
	75	3.75	0.33	*	*	*	1.00	*	*	*	1.66	0.42	*	*
	80	4.00	0.80	*	*	*	1.40	0.33	*	*	2.00	1.11	0.00	*
	90	4.50	1.50	0.54	*	*	2.00	1.18	0.20	*	2.50	1.81	1.00	*
	95	4.75	1.76	0.91	*	*	2.23	1.50	0.63	*	2.69	2.08	1.36	*
	100	5.00	2.00	1.23	0.33	*	2.42	1.92	1.00	0.00	2.85	2.30	1.66	0.00
4c	60	2.40	*	*	*	*	*	*	*	*	*	*	*	*
	65	2.60	*	*	*	*	*	*	*	*	*	*	*	*
	75	3.00	*	*	*	*	*	*	*	*	0.00	*	*	*
	85	3.40	*	*	*	*	0.18	*	*	*	0.72	*	*	*
	90	3.60	0.00	*	*	*	0.50	*	*	*	1.00	0.18	*	*
	95	3.80	0.30	*	*	*	0.76	*	*	*	1.23	0.50	*	*
	100	4.00	0.57	*	*	*	1.00	0.23	*	*	1.42	0.76	0.00	*

LEGEND FOR TABLES 2, 3, AND 4

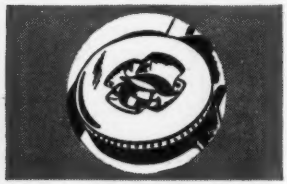
0.00=No increase in total monthly bill, although the number of pounds consumption has increased, therefore extra pounds do not cost anything.

*=Actual reduction in total monthly bill, so that not only do the increased pounds cost nothing, but the pounds used in cooking cost less. Obviously this is a condition to be avoided.

Y=More than 0.000c per lb., but less than 0.00c per lb.

Time Is Rationed, Too

TWICE a week I'm at the Red Cross all day. There's no OPA to ration my time, but I have to make every hour count. I rush in at 5:30, toss off my hat, and hurry to get dinner ready by six. That's when a cook's best friend is her skillet. But I think *my* best friend is the Giant Burner on my Grand Range, which does such a fast job of cooking an appetizing meal, ready to put on the table piping hot by the time Jack gets home. The Giant Burner is only one of a dozen ways that my Grand saves me precious time and effort. And some day, when the new Grands are ready after the war, you can be sure that I'm going to have the latest, most modern model.



WHEN PEACE COMES...IT WILL BE GRAND

Grand

Grand Gas Ranges

DIVISION OF THE CLEVELAND COOPERATIVE STOVE COMPANY
CLEVELAND, OHIO

of rates works out. Let us assume that you get 12 cents per lb. for cooking gas, but offer a dual usage rate of 7c per lb. if the customer uses gas for water heating or refrigeration. If your customer has been using 40 lbs. per month for cooking, her monthly cooking bill would be $4.80, regardless of whether she was using gas for water heating or not. Now let us suppose that she increases her consumption to 100 lbs. per month by installing a gas fired water heater. If you

TABLE 3. SHOWING HOW THE ESTABLISHMENT OF DUAL USAGE RATES MAKES COMPETITION WITH LOW ELECTRIC RATES POSSIBLE

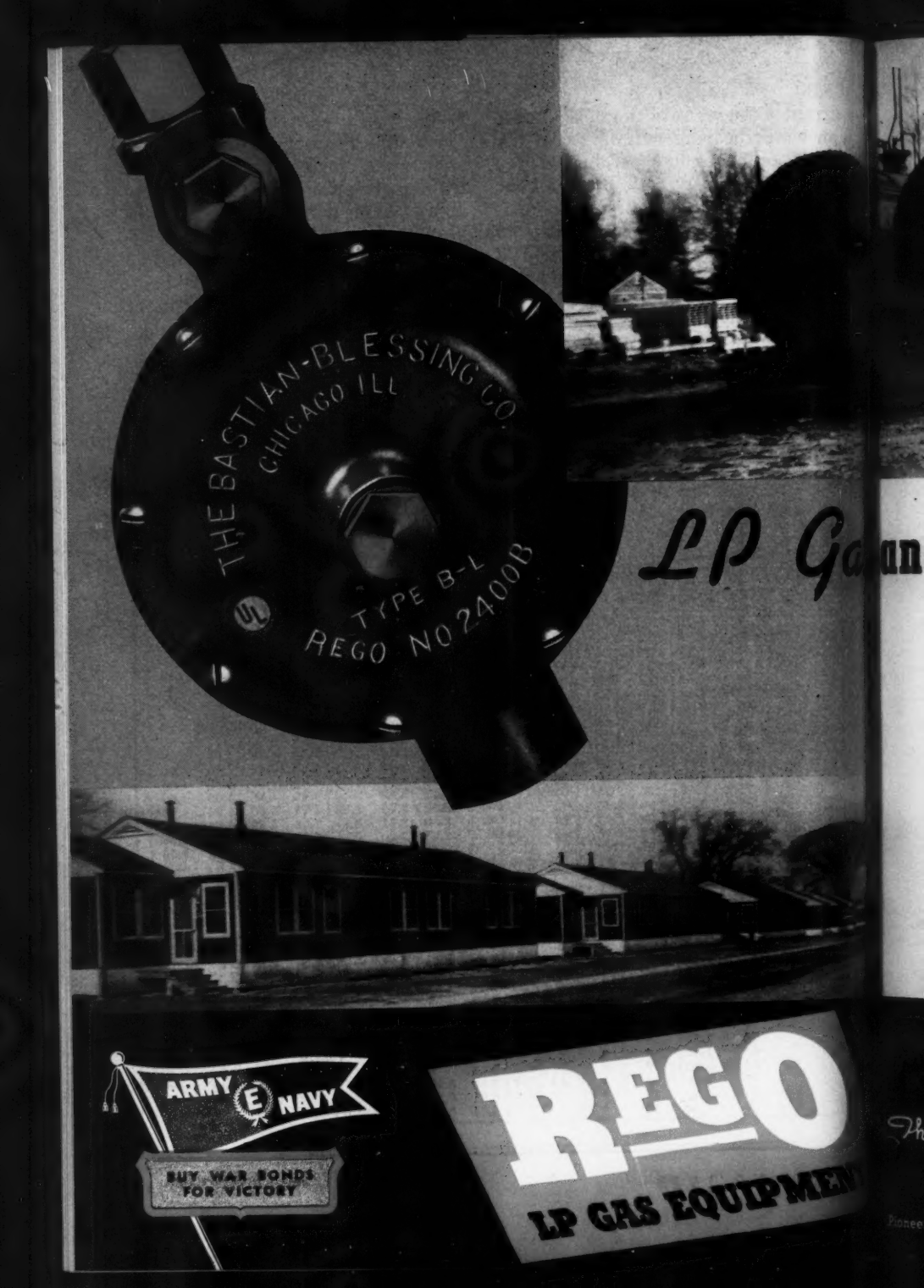
Dual Usage Rate Per Pound of Propane	*Total Number of Pounds of Propane Used in Month*	*Total Monthly Bill*	*Price Per Pound—Cooking Only*											
			9c Per Pound				*8c Per Pound*				*7c Per Pound*			
			Number of Pounds Propane Used Per Month For Cooking Only											
			30	35	40	50	30	35	40	50	30	35	40	50
			Monthly Cooking Bill—In Dollars											
			2.70	3.15	3.60	4.50	2.40	2.80	3.20	4.00	2.10	2.45	2.80	3.50
			Actual Price In Cents Per Lb. for Propane Used for Other Purposes											
8c	60	4.80	7.00	6.60	6.00	3.00	8.00	8.00	8.00	8.00	...	...	...	...
	65	5.20	7.14	6.83	6.40	4.66	8.00	8.00	8.00	8.00	...	...	...	...
	70	5.60	7.25	7.00	6.66	5.50	8.00	8.00	8.00	8.00	...	...	...	...
	80	6.40	7.40	7.22	7.00	6.33	8.00	8.00	8.00	8.00	...	...	...	...
	90	7.20	7.50	7.36	7.20	6.75	8.00	8.00	8.00	8.00	...	...	...	...
	95	7.60	7.53	7.41	7.27	6.88	8.00	8.00	8.00	8.00	...	...	...	...
	100	8.00	7.57	7.46	7.33	7.00	8.00	8.00	8.00	8.00	...	...	...	...
7c	60	4.20	5.00	4.20	3.00	*	6.00	5.60	5.00	2.00	7.00	7.00	7.00	7.00
	65	4.55	5.28	4.66	3.80	0.33	6.14	5.83	5.40	3.66	7.00	7.00	7.00	7.00
	70	4.90	5.50	5.00	4.33	2.00	6.25	6.00	5.66	4.50	7.00	7.00	7.00	7.00
	80	5.60	5.80	5.44	5.00	3.66	6.40	6.22	6.00	5.33	7.00	7.00	7.00	7.00
	90	6.30	6.00	5.72	5.40	4.50	6.50	6.36	6.20	5.75	7.00	7.00	7.00	7.00
	95	6.65	6.07	5.83	5.54	4.77	6.53	6.41	6.27	5.88	7.00	7.00	7.00	7.00
	100	7.00	6.14	5.92	5.66	5.00	6.57	6.46	6.33	6.00	7.00	7.00	7.00	7.00
6c	60	3.60	3.00	1.80	0.00	*	4.00	3.20	2.00	*	5.00	4.60	4.00	1.00
	65	3.90	3.42	2.50	1.20	*	4.28	3.66	2.80	*	5.14	4.83	4.50	2.66
	70	4.20	3.75	3.00	2.00	*	4.50	4.00	3.33	1.00	5.25	5.00	4.66	3.50
	80	4.80	4.20	3.66	3.00	1.00	4.80	4.44	4.00	2.66	5.40	5.22	5.00	4.33
	90	5.40	4.50	4.09	3.60	2.25	5.00	4.72	4.40	3.50	5.50	5.36	5.20	4.75
	95	5.70	4.61	4.25	3.81	2.66	5.07	4.83	4.54	3.77	5.53	5.41	5.27	4.86
	100	6.00	4.71	4.38	4.00	3.00	5.14	4.92	4.66	4.00	5.57	5.46	5.33	5.00
5c	60	3.00	1.00	*	*	*	2.00	0.80	0.00	*	3.00	2.20	1.00	*
	65	3.25	1 57	0.33	*	*	2.42	1.50	0.20	*	3.28	2.66	1.80	*
	70	3.50	2.00	1.00	*	*	2.75	2.00	1.00	*	3.50	3.00	2.33	0.00
	80	4.00	3.00	1.88	1.00	*	3.20	2.66	2.00	0.00	3.80	3.44	3.00	1.66
	90	4.50	3.66	2.45	1.80	0.00	3.50	3.09	2.60	1.25	4.00	3.72	3.40	2.50
	95	4.75	3.92	2.66	2.09	0.55	3.61	3.25	2.81	1.66	4.07	3.83	3.54	2.75
	100	5.00	4.14	2.84	2.33	1.00	3.71	3.38	3.00	2.00	4.14	3.92	3.66	3.00
4c	60	2.40	*	*	*	*	0.00	*	*	*	1.00	*	*	*
	65	2.60	*	*	*	*	0.57	*	*	*	1.42	0.50	*	*
	70	2.80	0.25	*	*	*	1.00	0.00	*	*	1.75	1.00	0.00	*
	80	3.20	1.00	0.11	*	*	1.60	0.88	0.00	*	2.20	1.66	1.00	*
	90	3.60	1.50	0.81	0.00	*	2.00	1.45	0.80	*	2.50	2.09	1.60	0.33
	95	3.80	1.69	1.08	0.36	*	2.15	1.66	1.09	*	2.61	2.25	1.81	0.66
	100	4.00	1.85	1.30	0.66	*	2.28	1.84	1.33	0.00	2.71	2.83	2.00	1.00
3c	60	1.80	*	*	*	*	*	*	*	*	*	*	*	*
	65	1.95	*	*	*	*	*	*	*	*	*	*	*	*
	70	2.10	*	*	*	*	*	*	*	*	0.00	*	*	*
	80	2.40	*	*	*	*	0.00	*	*	*	0.60	*	*	*
	90	2.70	0.00	*	*	*	0.50	*	*	*	1.00	0.45	*	*
	95	2.83	0.23	*	*	*	0.69	0.0Y	*	*	1.15	0.66	0.09	*
	100	3.00	0.42	*	*	*	0.85	0 30	*	*	1.28	0.84	0.33	*

grant a 7-cent rate the 60 lbs. used in water heating will only cost her $2.20 or 3.66 cents per lb. If you accept an energy ratio of 4.93 kwh. to 1 lb. of propane in water heating, then electricity would have to sell at 3.66 divided by 4.93 or 0.74 cents per kwh. to be on a break-even basis.

Our problem of successfully competing with electricity is not so much a question of lower gas prices as it is one of correctly scaled rates. By knowing our prices and how to apply them with the same technique as is used by the electric industry we have nothing to fear and we can get our share of the business. Let us give proper thought to this problem and by rearrange-

TABLE. 4. SHOWING HOW THE ESTABLISHMENT OF DUAL USAGE RATES MAKES COMPETITION WITH LOW ELECTRIC RATES POSSIBLE

Dual Usage Rate Per Pound of Propane	Total Number of Pounds of Propane Used in Month	Total Monthly Bill	Price Per Pound—Cooking Only: 6c Per Pound				5c Per Pound				4c Per Pound			
			Number of Pounds Propane Used Per Month For Cooking Only											
			30	35	40	50	30	35	40	50	30	35	40	50
			Monthly Cooking Bill—In Dollars											
			1.80	2.10	2.40	3.00	1.50	1.75	2.00	2.50	1.20	1.40	1.60	2.00
			Actual Price In Cents Per Lb. for Propane Used for Other Purposes											
5c	60	3.00	4.00	3.60	3.00	0.00	5.00	5.00	5.00	5 00	...	...	...	...
	65	3.25	4.14	3.83	3.40	1.66	5.00	5.00	5.00	5.00	...	...	...	...
	70	3.50	4.25	4.00	3.66	2.50	5.00	5.00	5.00	5 00	...	...	...	...
	75	3.75	4.33	4.12	3.85	3.00	5.00	5.00	5.00	5.00	...	...	...	...
	80	4.00	4.40	4.22	4.00	3.33	5.00	5.00	5.00	5 00	...	...	...	...
	85	4.25	4.45	4.30	4.11	3.57	5.00	5.00	5.00	5.00	...	...	...	...
	90	4.50	4.50	4.36	4.20	3.75	5.00	5.00	5.00	5 00	...	...	...	...
	95	4.75	4.53	4.41	4.27	3.88	5.00	5.00	5.00	5.00	...	...	...	...
	100	5.00	4.57	4.46	4.33	4.00	5.00	5.00	5.00	5.00	...	...	...	...
4c	60	2.40	2.00	1.20	0.00	*	3.00	2.60	2.00	*	4.00	4.00	4.00	4.00
	65	2.60	2.28	1.66	0.80	*	3.14	2.83	2.40	0.66	4.00	4.00	4.00	4.00
	70	2.80	2.50	2.00	1.33	*	3.25	3.00	2.66	1.50	4.00	4.00	4.00	4.00
	75	3.00	2.66	2.25	1.71	0.00	3.33	3.12	2.85	2.00	4.00	4.00	4.00	4.00
	80	3.20	2.80	2.44	2.00	0.66	3.40	3.22	3.00	2.33	4.00	4.00	4.00	4.00
	85	3.40	2.90	2.60	2.22	1.14	3.45	3.30	3.11	2.57	4.00	4.00	4.00	4.00
	90	3.60	3.00	2 72	2.40	1.50	3.50	3.36	3.20	2.75	4.00	4.00	4.00	4.00
	95	3.80	3.07	2.83	2.54	1.77	3.53	3.41	3.27	2.88	4.00	4.00	4.00	4.00
	100	4.00	3.14	2.92	2.66	2.00	3.57	3.46	3.33	3.00	4.00	4.00	4.00	4.00
3c	60	1.80	0.00	*	*	*	1.00	0.20	*	*	2.00	1.60	1.00	*
	65	1.95	0.42	*	*	*	1.28	0.66	*	*	2.14	1.83	1.40	*
	70	2.10	0.75	0.00	*	*	1.50	1.00	0.33	*	2.25	2.00	1.66	0.50
	75	2.25	1.00	0.37	*	*	1.66	1.25	0.71	*	2.33	2.12	1.85	1.00
	80	2.40	1.20	0.66	0.00	*	1.80	1.44	1.00	*	2.40	2.22	2.00	1.33
	85	2.55	1.36	0 90	0.33	*	1.91	1.60	1.22	0.14	2.45	2.30	2.11	1.57
	90	2.70	1.50	1.09	0 60	*	2.00	1.72	1.40	0.50	2.50	2.36	2.20	1.75
	95	2.85	1.61	1.25	0.81	*	2.07	1.83	1.54	0.77	2.53	2.41	2.27	1.88
	100	3.00	1.71	1.38	1.00	0.00	2.14	1.92	1.66	1.00	2.57	2.46	2.33	2.00
2c	60	1.20	*	*	*	*	*	*	*	*	0.00	*	*	*
	65	1.30	*	*	*	*	*	*	*	*	0.28	*	*	*
	70	1.40	*	*	*	*	*	*	*	*	0.50	0.00	*	*
	75	1.50	*	*	*	*	0.00	*	*	*	0.66	0.25	*	*
	80	1.60	*	*	*	*	0.20	*	*	*	0.80	0.44	0.00	*
	85	1.70	*	*	*	*	0.36	*	*	*	0.90	0.60	0.22	*
	90	1.80	0.00	*	*	*	0.50	0.09	*	*	1.00	0.72	0.40	*
	95	1.90	0.15	*	*	*	0.61	0.25	*	*	1.07	0.83	0.54	*
	100	2.00	0.28	*	*	*	0.71	0.38	0 00	*	1.14	0.92	0.66	0.00


THE BASTIAN-BLESSING CO.
CHICAGO ILL
TYPE B-L
REGO NO 2400B
LP Ga
ARMY E NAVY
BUY WAR BONDS FOR VICTORY
REGO
LP GAS EQUIPMEN

and REGO HELP RELIEVE *Housing Problems*

One of the largest housing projects in Virginia is being developed where over 1000 buildings are going up to house war workers and their families. LP Gas has been selected for cooking and water heating. It is supplied from the 4 tanks (shown above) having a total capacity of 52,000 gallons and is piped through mains to the entire community. The Modern Gas Company in Norfolk designed and installed the entire storage and distribution system and is servicing the equipment. Rego valves and regulators are doing a great job here as always.

Alert dealers can help to bring final victory by pointing out opportunities where LP Gas can do a better job in the war effort.

Insure perfect performance and economy by insisting on genuine Bastian-Blessing products identified by the RegO trademark.

The BASTIAN-BLESSING Co.
4233 Peterson Avenue Chicago, Ill.

Pioneers in equipment for using and controlling high pressure gases.

REGO LP GAS EQUIPMENT UL

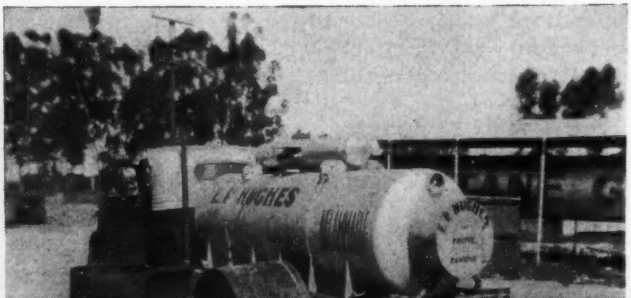
ment of existing schedules refute some of this idle talk about 1-cent and 2-cent electric rates!

Now let's review this chapter with the usual kind of questions. The answers are on page 60.

•

Questions on Chapter 21

1. What material contained in an electric range will deterioate more rapidly than any material used in a gas range?
2. Under what conditions does a gas oven heat a kitchen no more than an electric oven?
3. What fuel do approimately 90% of the commercial eating establishments use?
4. Why are electric water heaters excessively large in proportion to gas water heaters?
5. What are the two parts of an electric water heater or range most liable to give trouble?
6. If a customer uses 40 lbs. of propane for cooking each month at a cost of 10 cents per lb. and later installs a water heater so that his consumption is 100 lbs. per month at 5 cents per lb., what is he actually paying per pound for the 60 lbs. used in water heating?
7. At what price per kwh. would electricity be on a break-even basis?
8. Why is owning of an electric service a doubtful advantage in most cases?
9. If electric companies met every service condition rendered by the majority of bottled gas distributors what would they do in reference to interior wiring?
10. What causes electric heating units to become less efficient with continuous usage?



▲

Tank truck and bulk plant of E. P. Hughes, LP-Gas dealer located in San Diego county, California, at the town of Ramona.

▼

There'll be NO NIGHTMARE in my dream home

★ *"I've had enough of the nightmare of playing furnace man... of galloping cellar stairs. I'm going to have gas heating... the Bryant kind... and nothing else will do!"*

During these war years, Mr. and Mrs. America have done some figuring in regard to heating. They have discovered that the comfort, convenience and cleanliness of gas heating costs no more in the long run—and they will be ready to listen to your story on Bryant gas heating when the war is over.

In selling Bryant L.P.G. equipment, you will have what *you* will appreciate, too—(1) quality equipment, made by the pioneers of gas heating (2) a nationally advertised, profitable line which can be sold for all types of homes (3) the sales and engineering aid of the nationwide Bryant organization.

THE BRYANT HEATER COMPANY
17825 St. Clair Avenue Cleveland 10, Ohio
One of the Dresser Industries

Let the pup
be your
furnace man

Bryant
GAS HEATING

Partial Venting Helps Solve Gas "Sweating" Bugaboo

By E. ROY TAYLOR

Atlanta, Georgia

OF course gas does not "sweat," but there is a story too generally current among consumers that it does. As a matter of fact, "sweating" is one of the most common of natural phenomena. It occurs as dew, wet sidewalks, terraza floors and in everyday summer life there is "sweat" on glasses of cold liquid. Warm, moist air meeting a cold air stratum produces rain. An unvented gas heater in use, produces by combustion warm water vapor, which meets cold walls, window panes, furniture—just "rain" again.

E. ROY TAYLOR

As stated, water vapor is one of the products of combustion. In the case of bulk fuel (wood, coal, coke, oil) this vapor passes out the flue. The flue is a necessity with bulk fuel to carry off other products of combustion aside from water vapor. Liquefied gas, being a "clean" fuel adapts itself to unvented appliances, the most common being the radiant type heater.

For certain uses such as spot heating, early fall and late spring chill, and in winter as supplementary heat, the radiant type unit has gained wide acceptance. It represents a small investment, is available through most LP-Gas dealers and other retail sources and can be installed by most any person. The tendency has been to use it promiscuously and "sweating" has resulted and will result where there is underheating, lack of circulation, and cold walls, windows and other smooth surfaces which make ideal condensers. This is particularly noted in the small, tight bungalows, plastered or wallboard and brick-veneer construction. There is less "sweating" in the old antebellum houses, with their high-ceilinged rooms, (usually wood).

The complaint of "sweating" is especially prevalent in southern states east of the Mississippi river where both natural and liquefied gas have had such growth and wide acceptance for heating. This area is within the 52-inch-plus rain belt, with a yearly average moisture of around 87%. There is a seven months heating period because of this "dampness" and except for about six weeks in January and February, the weather has intermittently cold and warm rainy spells. It is not uncommon to find radiant type heaters in use as early

as August and as late as May. There is enough sunshine, however, so that the walls are not cold (usually above 55°) and there is very little "sweating" except during the six weeks continuous cold, when the walls condense this vapor and cause many complaints.

A radiant heater is not constructed for effective venting, but some degree of success against "sweating" has resulted from putting vents on them. However, the input is low and venting will take a good deal of the warmth from these small units.

But what to do about it? The answer is to install vented equipment for at least 50% of the required input. These vented units circulate warm-dry air and raise the temperature of the entire house to around 60°. The unvented heater comes into its own in such instances to build up the temperature in the rooms most used to around 72°, the point being that comfort is had where it is required without having to maintain, at more cost, 72° throughout the house.

One of the most successful vented units is the small floor furnace which takes up no room, does not require a basement and operates economically for base heat. One or two supplementary heaters makes a cozy home.

In the larger houses, "flashing"

Whether vented or not, every heater should have precise adjustments to ensure efficiency and economy of operation.

at morning and evening, supplementing with radiant type heaters in the rooms most used, is very satisfactory and very economical. I know one job which usually ran $185 yearly for heating before being equipped with a centrally fired gas furnace. This was an eight-room, two-story brick veneer. The furnace was used for first fire in the morning and again at about 4 o'clock in the afternoon. Three radiant heaters furnished supplementary heating during the day and after the family had settled for the evening. There was a decrease of 21% in the heating cost and a great deal more satisfaction than in former winters. The radiant heaters alone would have ruined the interior of the house and the furniture as well, due to underheating and condensing.

Use a Little Diplomacy

The next time you are confronted by an irate, and perhaps tearful housewife with the story of "ruined furniture, falling wall paper, piano strings rusting, water freezing in the corner where it has dripped from baseboards, etc.", if you use the direct method and tell her that gas does not "sweat" you are lucky to escape with your life. If you express a desire to see the havoc with the purpose of correcting it, and do install a vented unit, you will get a grand story about the economical, quick, clean fuel and a lot of other sales points. The answer to the question, "Why didn't my house "sweat" before installing gas?" is that it would have done so under like conditions.

The story of gas "sweating" has an expanding audience and will grow with the widening use of gas as fuel, and one of the most constructive ways a gas man can serve his customers is to search out the sources of these stories and complaints and correct the cause. You have a golden opportunity to create lasting good will and pave the way for a lot of profitable business "when time is tolerable again," as our cook expresses it.

◆ ◆

Government Will Urge Fuel Conservation

Cooperation of industry in a nationwide conservation campaign to release critical resources—fuel, manpower, equipment and materials—for war purposes has been requested by Secretary of the Interior Harold L. Ickes, Defense Transportation Director Joseph B. Eastman, and War Production Board Chairman, Donald M. Nelson.

In a joint statement they ask the coal, petroleum, electric, natural and manufactured gas, water supply, communications and transportation industries to formulate plans for an intensive voluntary campaign to get under way late this summer.

The campaign will be directed toward both household, commercial and industrial users and will be guided by an inter-agency government committee. J. A. Krug, Director, Office of War Utilities, Ralph K. Davies, Deputy Petroleum Administrator for War, H. A. Gray, Deputy Solid Fuels Administrator for War, Mr. Eastman, and assistants to these officers will compose the committees.

Meetings now are being held with leaders of the various industries by appropriate government officials to work out the programs each will undertake.

RAIN OR SHINE... I'M STILL DOING A REAL SELLING JOB!

"You don't find me missing any chance to talk to customers about L-P Gas equipment. Every time I make a delivery I take the opportunity to sell good will.

"You see, I figure it this way. After the war is over, the market for L-P Gas and equipment will be bigger than ever. And, if I keep a customer satisfied with her L-P gas stove, she's going to be a real prospect for a gas refrigerator when peace comes.

"Creating good will isn't hard in most cases. Usually I find that a customer's appliances are okay, but the fact that I keep in touch with her and show interest lets her know I'm ready to stand behind the products I sell."

• • •

"SATISFIED CUSTOMERS TODAY... MEAN MORE PROSPECTS TOMORROW"

FREE L-P REFRIGERATOR SERVICE MANUAL—Write today for your free copy to Servel, Inc., Evansville, Ind.

SERVEL,
Incorporated

PEACETIME MAKER OF THE SERVEL GAS REFRIGERATOR

PAW Urges Industry to Speed Return Of Empty LP-Gas Cylinders

THE Petroleum Administration for War issued a statement Sept. 3 urging all dealers, distributors and consumers of liquefied petroleum gas to speed up the handling and return of liquefied petroleum gas cylinders.

"Because of the shortage of compressed gas cylinders," PAW said in a statement, "it is highly essential that all liquefied petroleum gas consumers, dealers and distributors promptly return all empty cylinders and all idle cylinders to the owners of the cylinders for immediate refilling.

"The shortage is such that all cylinders necessarily must be used in the most efficient manner possible in order that the increasingly heavy military, war industry and essential civilian requirements for liquefied petroleum gas may be met in full. Public carriers can help immeasurably by placing as much emphasis on the expeditious return of empty cylinders as they now accord shipments of full containers.

"Despite the heavy war demands for liquefied petroleum gas, we must face the fact that only a relatively few additional containers can be made available at this time to the industry. It is imperative, therefore, that no existing cylinders remain idle and that there be no delay in the turnover of empty containers."

This picture shows the directors of the California Natural Gasoline Association in session July 20. The newly elected president, R. W. Heath, is seated second from the left in the front row.

DALLAS TANK & WELDING COMPANY, INC.

BUTANE DIGEST

By W. W. BANKS

The Dallas Tank & Welding Company has gone to war in an "all out" effort to win by doing our part . . . to help keep America American . . . to hasten the day of victory and peace.

At this moment Allied soldiers probably are using Dallas-made pontoons for safely crossing some stream or river in some war theater . . . at this moment Dallas-made buoys are directing ships away from dangerous shoals.

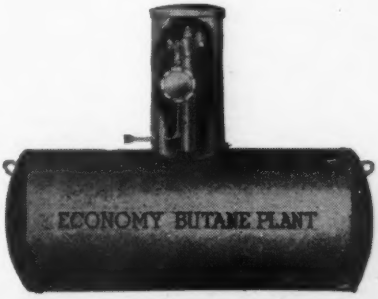
•

We take our job seriously here at the Dallas Tank & Welding Company. Each and every one of 149 employees have subscribed to the 10% payroll War Bond Saving Plan. Some have subscribed as high as 35%! Their contribution to the war effort was recently recognized by the government with the Minute Man Award.

Twenty-seven of our men have answered the call to arms in the various branches of the service. The 149 of us left on the job will "back the attack" by continuing to buy War Bonds and build fabrications for victory!

•

Buy More War Bonds!



DALLAS TANK AND WELDING COMPANY, INC.

201-5 W. COMMERCE ST. DALLAS, TEXAS

CARE and OPERATION of the new ROPER GAS RANGE

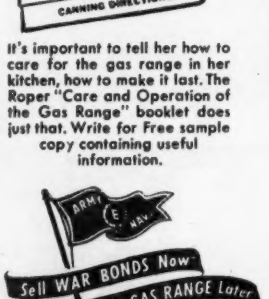
- OVEN DIRECTIONS
- TOP-OF-RANGE DIRECTIONS
- BROILING DIRECTIONS
- CANNING DIRECTIONS

It's important to tell her how to care for the gas range in her kitchen, how to make it last. The Roper "Care and Operation of the Gas Range" booklet does just that. Write for Free sample copy containing useful information.

When V-Day brings our victorious fighting men home from the global war fronts, your customers will require many important things for their homes. One of these will be the new Roper (lp) gas range—a range that has always been America's finest in terms of customer appeal.

After the war the Roper (lp) gas range will march along from where it left off—giving you distinctive styling, practical engineering, new features, and sound, hard-hitting promotions.

Until that great day comes, urge your customers to Buy More War Bonds and do everything else to hasten the day of Victory. That includes taking good care of the ranges they now own.



ROPER (lp) Means
Certified Performance

GEO. D. ROPER
CORPORATION
GENERAL SALES OFFICE AND PLANT ROCKFORD ILLINOIS

ROPER GAS RANGES FOR ALL GASES INCLUDING (LP) LIQUEFIED PETROLEUM GAS

Utility Has Served LP-Gas 14 Years

OPERATING from its main offices in Walla Walla, Wash., the Northwest Cities Gas Co. serves manufacturing plants and distribution systems in Oregon, Washington and Idaho. Although the company maintains eight auxiliary plants, each complete with offices and sales rooms in the three northwest states, the Walla Walla branch handles the majority of records for the concern which took over the gas fuel system in that area in 1929.

General management of the gas company is under the direction of H. M. Thomas, who has been identified with the industry approximately one-third of a century. The management of the main Walla Walla plant is the responsibility of Arthur J. Anderson who has been associated with the company since it entered the northern territory in 1929.

At that time manufactured gas as a fuel had been an old and trusted part of domestic and business life in Walla Walla, having been introduced in the spring of 1881. Today the Northwest Cities expends some $200,000 each year on fuel alone and uses various types of gas, including butane plants, oil, water-gas and coal systems.

Northwest Cities employs a staff of more than 100 persons at its various branches in Walla Walla, Yakima and Clarkston, Wash.; Pendleton, Astoria, Eugene and Springfield, Ore., and Lewiston, Idaho, necessitating an annual payroll of over $150,000.

Modern and highly efficient is the $500,000 Walla Walla plant and distribution system. It includes a substantial brick building some 41½ by 140 ft., inside measurements; two storage holders with a total capacity of 185,000 cu. ft. of gas; a meter repair shop for handling repairs from the Lewiston and Pendleton areas as well as Walla Walla. The plant has over 55 miles of mains and is connected with 3000 services, 2000 of which are currently active.

Butane gas is used in the plants at Lewiston, Pendleton, Clarkston and Walla Walla. Ransome Co., of Emeryville, California, has installed, in addition to a small plant at Clarkston, Kemp mixing pumps at both Lewiston and Pendleton. These plants are fully automatic and make directly into the storage holders. The plant at Lewiston is of 4500 cu. ft. per hour capacity, and the one at Pendleton 9000 cu. ft. per hour.

Walla Walla has a 15,000-gal. butane storage tank with heat exchangers and other equipment needed to supply the Continental Can Co.'s plant as well as the west and northwest sections of the city not now connected with the mains of the central plant.

◆ ◆

Petroleum Equipment Gets Modifying Order

Both used and new equipment in the petroleum industry may now be sold by one operator to a supplier as intermediary prior to its resale to another petroleum operator, without a direct sale being involved, under terms of an amendment to PRO P-98-c, issued Aug. 24 by WPB.

The amended order allows suppliers to purchase, repair and recondition used equipment and then seek a buyer, because the direct resale provision has been eliminated.

NFPA Publishes Booklet On Safeguarding Gas Appliances

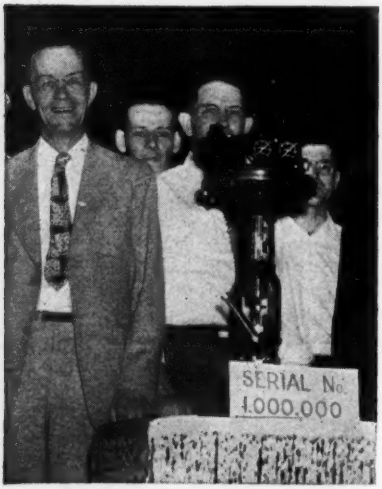
The National Fire Protection Association, 60 Batterymarch St., Boston, has just published an important 18-page study entitled "Safeguarding Gas Appliances," by F. E. Vandaveer, assistant director, American Gas Association Testing Laboratories.

It reviews the outstanding record of reduction in fire losses attributed to gas and gas appliances during the past 17 years, describes American Standard approval requirements, and improvements in test equipment and procedure. Copies may be secured from the NFPA.

◆ ◆

Fisher Governor Co. Turns Out Its 1,000,000th Controller

Typical of the hundreds of thousands of Fisher Governor Co. automatic controllers that are serving critical war industries is the Serial No. 1,000,000, recently installed in a new aviation gasoline plant in Kentucky. It is designated as Type 435-T.



N. H. Chadderdon, president of Fisher Governor Co., and other employes with the one millionth Fisher controller.

The first Fisher governor was built in 1880 and by 1937 500,000 controllers had been manufactured. Due to the all-out war effort of the company and to wide acceptance of Fisher controllers, the next 500,000 controllers were produced from 1937 to July, 1943, a period of less than six years. In this same time, Fisher Governor Co. has also manufactured large quantities of smaller specialties that do not carry serial numbers.

The 1,000,000th Fisher controller was unveiled at a Blue Network broadcast from Marshalltown, Iowa, on July 14 in honor of the Army-Navy "E" Award to Fisher employees and the company.

◆ ◆

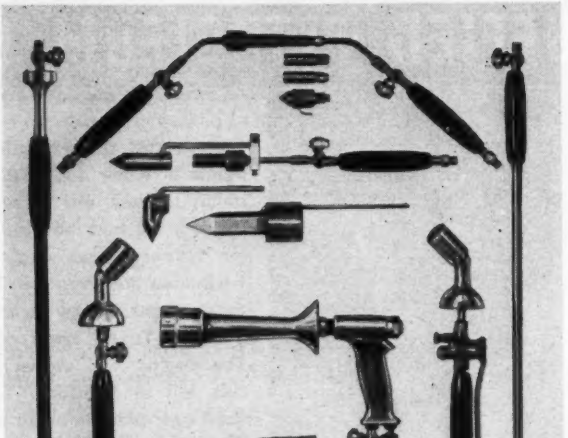
"Engineer's Pocket Book" Is Handy Reference

Engineers in all lines will find a valuable reference volume in the "Engineer's Pocket Book," by F. J. Camm. It contains a digest of the tables and formulas which engineers require in their daily work and which ordinarily compel them to refer to several books. It is compact enough to fit in a coat pocket and all subject matter is carefully segregated for easy and complete reference.

Chapters of special interest to men in the liquefied petroleum gas industry include the following titles: Abbreviations; Units; English Weights and Measures; Heat, Time and Velocity; Force, Energy and Power; Pressure; Equivalents of Units; Twist Drills; Temparature Conversion Tables; Weight of Copper Tube; Twist Drill Gages, and Slide Rule Gage Points.

"Engineer's Pocket Book" is published by Chemical Publishing Co., Inc.. 234 King St., Brooklyn, N. Y., and sells for $4.25.

GAS Torches



We manufacture a complete line of industrial torches which operate on any of the liquefied petroleum gases. Shipment from stock. Priority and L-86 Certification Required.

RANSOME COMPANY

Designing and Constructing Engineers

4030 HOLLIS STREET · EMERYVILLE, CALIFORNIA

Ransome

Direct Hauling Will Relieve Tank Cars

CONSTITUTING the second large truck and trailer unit in the last several months, and the twenty-eighth piece of rolling equipment for the Fannin Gas & Equipment Co., Phoenix, Ariz., an 8835 gross gallon butane transport was delivered to Ernest Fannin Aug. 20 by the American Pipe & Steel Corp., Alhambra, Calif. It was driven to Phoenix by Newt Blair, with Mr. Fannin riding as a critical but well pleased passenger.

With an overall length of 60 ft. from bumper to bumper, equipped with all accepted safety features, and designed to carry a maximum payload with the highest efficiency in road operation, the job is the result of long planning and engineering research by R. K. Cadwell, plant engineer, and J. Warren McMillan, Jr., district manager, of American Pipe & Steel, builders of the tanks and mountings, and the Fruehauf Trailer Co., which constructed the heavy duty, three-axle trailer at its Los Angeles plant under the direction of S. K. Porter, service superintendent.

It also emphasizes the current trend among large operators to make themselves independent of public transportation systems by providing their own equipment for hauling fuel from refineries to bulk plants. As the Fannin transport will be used exclusively for this purpose it has been provided with both side and bottom outlets but no pump. The internal piping on the fill line is 4 in. in diameter as against the usual 2½ in. to 3 in., and there are 3-in., 300 lb. Crane globe valves for liquid outage so there will be no restriction in the flow. A 2-in. vapor return line with a 2-in. globe valve is used instead of the customary 1¼-in. valve. Sealing lugs have been placed on the vapor and liquid lines to prevent any removal of fuel between refineries and bulk plant.

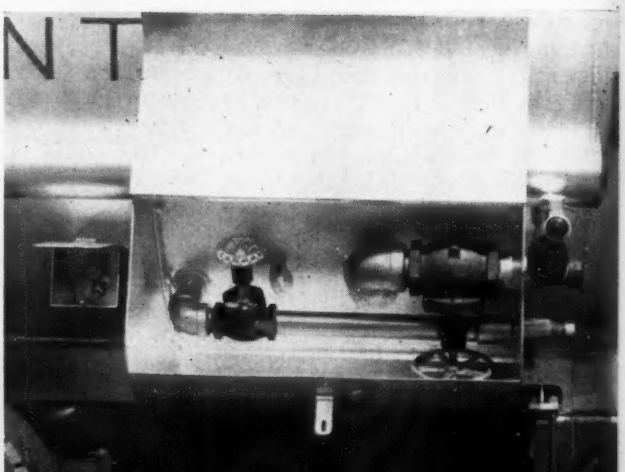
The tanks are stress relieved, the first vessels to be put in the

The 8835 gross gallon butane transport which will haul butane from Los Angeles to the bulk plant of Fannin Gas & Equipment Co., Phoenix, Ariz.

Tank Builders and the Job

ABOVE:

L. H. Tammen, assistant secretary, American Pipe & Steel Corp.; S. K. Porter, service superintendent, Fruehauf Trailer Co., and J. Warren McMillan, Jr., district manager, American Pipe & Steel Corp., standing beside the completed job. Showing on the tank side is the rotary gage.



RIGHT:

The small box at left contains the pressure gage. Next is shown the 2-in. vapor return valve and the 3-in. liquid outage valve. Both truck and trailer tanks are similarly equipped.

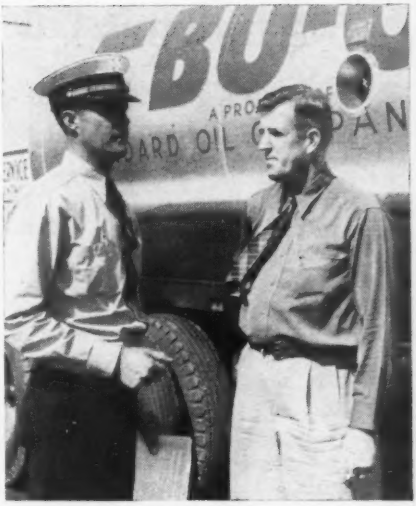
new furnaces at the company's plant. They were X-rayed for insurance against flaws in the welds, and to permit use of lighter steel which is partriotically important at this time because of war demands for steel. The truck tank has a capacity of 3920 gals. and the trailer tank 4915 gals., built for 125 lb. working pressure under API and ASME codes. The shells are $\frac{3}{8}$ in. in thickness and the hemispherical heads are made of $\frac{1}{4}$-in. steel. The tanks are 75 in. O.D.; the overall length of the truck tank is 19 ft. 6 in. and trailer tank 24 ft. long. The tanks were calibrated by the Bureau of Weights and Measures of Los Angeles county and inspected by city, county and state officials.

Painted on the rear head of the trailer tank is, "Keep 'Em Cooking With Bu-Gas" and on each side thereof the popular phrase, "Buy More War Bonds."

Pressure tanks are mounted on the chassis for extra water for either the radiator or as auxiliary to the fire extinguisher in case of fire, and for a reserve supply of cylinder oil.

Construction of Trailer

The heavy duty S-cam type brakes on the trailer are on all three chrome-molybdenum drop forged I-beam axles, and are equipped with Fruehauf geared slack adjusters, to conserve weight. Longitudinal sill mountings for the tanks have made possible a low center of gravity. The draw bar is made as short as possible and the connection between truck and trailer is so designed that the trailer will follow with the least possible difficulty and will not cut in on corners. Trailer and connection are equipped with Timken tapered roller bearings.



Theo. S. Taylor, inspector for the Los Angeles fire department, and Ernest Fannin, purchaser of the transport.

The truck is equipped with a Fruehauf six-wheel attachment of the rocker arm type for flexibility, and powered with a 150 hp. Cummings diesel motor.

It required considerable time and effort to get WPB and ODT approvals for materials and equipment but most of the difficulties involved were in routine procedures rather than opposition to the transport, itself. Both government agencies have gone on record as favoring the building of privately owned transportation units whenever they can best serve the industry's needs and relieve railroad tank cars.

Answers

To Chapter 21
The Bottled Gas Manual

Here are the answers to the questions on Page 42 and which refer to problems in Chapter 21 of THE BOTTLED GAS MANUAL:

1. The insulation of the electric wires.
2. When it is properly connected to a flue.
3. Gas.
4. To take care of peak loads and preserve expensive heat units.
5. The heating elements and the contacts in the thermostatic controls.
6. 100 lbs. at 5 cents=$5
   40 lbs. at 10 cents=$4
   60 lbs. then cost....$1 or 1.66 cents per lb.
7. 1.66 cents divided by 4.93= 0.336 cents per kwh.
8. Because in the majority of cases it is impossible to purchase electric current from any other source.
9. Wire the interior of the house free of charge.
10. The formation of an oxide film upon the heating elements.

◆ ◆

WPB Forms May Be Reproduced By Users

Priorities Regulation No. 5 has been amended and simplified general rules provide for the reproduction of WPB forms and orders.

Anyone may reproduce any WPB form, order, or regulation, but in the following two cases any form or order when reproduced must have on its face the words "Specimen Copy" or "Information Copy" in letters not less than one inch high or in 36 point caps: (1) Forms or orders issued by an agency which have not yet been signed by it; ie. Form GA-146, which is used by various Industry Divisions of WPB, to authorize purchase or sale of particular goods must carry the specified words. The limiation does not apply to forms which are to be filed with a governmental agency and later issued to the applicant by the agency. Thus WPB-541 (old PD-1A) would not have to carry the words quoted above.

(2) Forms having a *serial number* and designed to be filed with an agency and later to be issued by it, but which have not yet been signed by the agency. The most common example is WPB-542 (formerly PD-3A), which is used by military procurement agencies.

◆ ◆

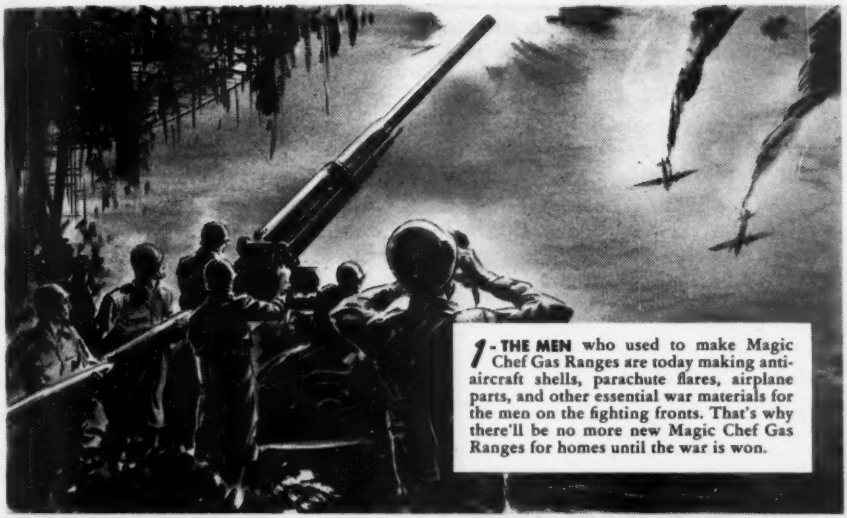
Gas Institute Reveals Plan to Publish New Quarterly

The first issue of "Gas Technology Review," a quarterly published by the Institute of Gas Technology, appeared early in July. Plans for the publication of this new bulletin, which will review papers from the technical press, were completed at a meeting of the board of Institute trustees held on May 28, when it was decided that the magazine should be a quarterly for at least its first year.

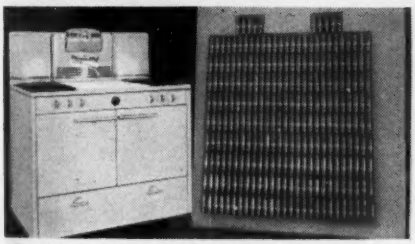
The subscription plan is that member companies will receive copies free for the first year, while non-members will be charged a moderate subscription rate.

"Gas Technology Review" is to serve as a medium of exchange for domestic and foreign periodicals on subjects related to the gas industry.

How many Magic Chef Gas Ranges to knock down a dive bomber?



1-THE MEN who used to make Magic Chef Gas Ranges are today making anti-aircraft shells, parachute flares, airplane parts, and other essential war materials for the men on the fighting fronts. That's why there'll be no more new Magic Chef Gas Ranges for homes until the war is won.



2-THE MATERIAL once used to make one All-American Magic Chef Gas Range now produces over 250 40mm. anti-aircraft shells . . . about enough for 2 minutes' fire from a modern anti-aircraft gun that could knock down an enemy dive bomber.

3-TODAY American Stove workers are working to close tolerances demanded for military equipment. Using new materials, new techniques. This knowledge, plus years of range making experience, will produce better Magic Chef Gas Ranges when victory comes.

Home Gas Co. Officials Are Prominent in War Effort

Gordon Beaton, assistant treasurer of Home Gas Co., Minneapolis, returned to his home office from Washington, D. C., early in September after a conference with Lieut. Francis T. McCahill, president of Home Gas, and his brother, Lieut. Commander Eugene P. McCahill, and gives the following interesting information regarding the war activities of the McCahill brothers:

"Lieut. Francis T. McCahill has been in the service of the U.S.N.R. since the spring of 1942. He spent a year in foreign service, several months of which he was on the Galapagos Islands as Executive Officer, and in the Canal Zone. He returned to the United States early in July of this year, and since then has been taking special courses at the Amphibious Training Base in Maryland. He expects to leave the States again very shortly, and is looking forward to seeing a lot of action.

"Lieut. Commander Eugene P. McCahill, who was actively associated in the Home Gas Co., has been in service, also the U.S.N.R., since July, 1941. Until the fall of 1942 he was with the Bureau of Aeronautics, Washington, D. C., when he was loaned to the Bureau of Yards and Docks for a special assignment. For the past year he has had charge of the acquisition of real estate for the navy, and has had various assignments taking him to several of the British-leased bases where he has made detailed surveys. He has recently returned from a four months' absence from the States on foreign duty."

Robt. E. Hardwicke Named PAW Special Counsel

Appointment of Robert E. Hardwicke of Fort Worth, Texas, as special counsel for PAW on a full time basis, with headquarters at Houston, was announced Sept. 10 by the Petroleum Administration for War.

Mr. Hardwicke will maintain liaison and collaborate with all the state regulatory agencies having to do with oil and gas. He will serve as special advisor on matters relating to petroleum production, not only in the District 3 office, but to all the district offices of PAW and the Washington office. He will represent PAW before the Interstate Oil Compact Commission and the various state regulatory agencies concerned with oil and gas matters, including Arkansas, Alabama, California, Colorado, Illinois, Louisiana, Mississippi, Michigan, Kansas, North Dakota, New Mexico, Oklahoma, and Texas.

He is known as one of the Nation's outstanding legal experts on state petroleum production regulatory activities.

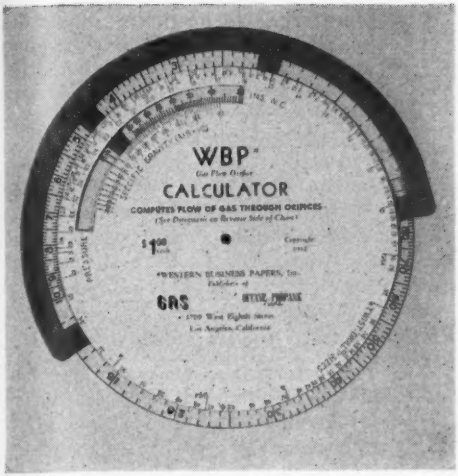
◆ ◆

Max Miller Heads New PAW Construction Division

Organization of an expanded construction division whose principal functions will be to expedite the construction of the 100-octane aviation gasoline plants has been announced by Acting Petroleum Administrator for War Ralph K. Davies.

Max B. Miller, formerly chief of the construction section of PAW's Refining Division, is director.

Entire responsibility for all phases of the 100-octane program, except construction, remains vested in the Refining Division.



NEW GAS FLOW ORIFICE CALCULATOR

Invaluable to LP-Gas Engineers, Shop Men, Domestic Appliance Service Departments, LP-Gas Appliance Manufacturers, and All Others Who Need to Check or Determine LP-Gas Orifice Sizes.

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- **Just Set Scales and Read**

Ever had to convert an appliance from manufactured or natural gas to LP-Gas and needed to know what orifice size to install? Ever had to estimate how much gas a burner could handle? Ever had to convert B.t.u. per hr. to cu. ft. per hr., or vice-versa? Ever had to know the B.t.u. input load of an appliance or industrial burner? With the Gas Flow Orifice Calculator you can quickly and accurately work out all these and many other problems.

Checks all factors relative to orifice sizing for gases from 300 B.t.u. to 3300 B.t.u. at pressures from .5-ins. to 15-ins. water pressure. Determines the flow of orifices from sizes 1 to 75 number drills, from sizes A to Z in letter drills, and from sizes 2/64 to 32/64 in fraction drills.

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Name.....**Position**.....

Company.....

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AGA Nominating Committee Names 1943-44 Selections

The general nominating committee of the American Gas Association has made its selection of officials to serve during the 1943-44 term and the list of nominees will be presented to the association at its regular annual meeting originally scheduled for Oct. 12-14 in St. Louis, but postponed until Oct. 26-28 so as not to conflict with the World Series baseball games.

The nominees are, for president, Ernest R. Acker, president, Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y.; for vice president, J. French Robinson, president, The East Ohio Gas Co., Cleveland, Ohio; for treasurer, J. L. Llewellyn, insurance manager, The Brooklyn Union Gas Co., Brooklyn, N. Y.

◆ ◆

ODT Will Assist Truck Owners to Get New Tires

Eligible truck operators who have tire ration certificates but have not been able to find the proper tires within their county may apply to the nearest Motor Transport District Office of ODT for assistance, according to ODT directive No. 335.

Information they give will be transmitted daily to the Office of the Rubber Director who will try to arrange for proper redistribution of tires so that all certificates can be honored as soon as possible after issuance.

◆ ◆

Anchor Adds Tank Cars To Transportation Facilities

Officials of the Anchor Petroleum Co., Tulsa, producers and marketers of butane and propane, have increased its transportation facilities through the purchase of additional railway tank car equipment.

The new tank cars are 225-lb. working pressure and are of the latest design. This type of equipment gives flexibility to Anchor's transportation facilities, for these cars can be used to move either propane, iso- or normal butane or isopentane.

The rapidly increasing war demands for Anchor products called for added transportation facilities, and with this new equipment, the best possible service will be given Anchor's customers.

◆ ◆

ICC Plans Changes In Certain Shipping Regulations

The Interstate Commerce Commission has announced its intention to consider amendments to certain of its regulations and specifications applying to shippers, but any party desiring to be heard upon any of them may have that privilege by so advising the commission in writing within 20 days from Sept. 20.

Proposed amendments cover:

Loading and placarding of car by shippers.

Repairs to forge-welded tanks of ICC-105A series, or fusion-welded tanks of ICC-W classes.

Filling densities for all-year shipments.

◆ ◆

Housing Survey Will Indicate Market for Appliances

Field offices of the Federal Housing Administration are launching an immediate survey in all important housing markets to determine the ability of the construction industry to resume home-building operations promptly after the war, Commissioner Abner H. Ferguson announced Aug. 28.

The survey is regarded as an important step in the National Housing Agency's program to prepare for postwar activities in the housing field and will be a valuable criterion of what the appliance market will be.

ODT Wants Short Hauls Diverted to Tank Trucks

Clark E. Seargeant, petroleum transporter of Santa Barbara, Calif., has been appointed as consultant to the Tank Truck Section of ODT's Division of Petroleum and Other Liquid Transport for twelve western states, the Office of Defense Transportation announced Sept. 2.

Mr. Seargeant, who has been a member of the California Petroleum Transport Advisory Committee of ODT since May 1942, will work with the San Francisco regional ODT Section of Tank Car Service to promote diversion of short-haul petroleum movements from tank car to tank truck.

Mr. Seargeant's new duties will embrace activities in the states of California, Washington, Oregon, Utah, Nevada, Arizona, Colorado, New Mexico, Montana, Idaho and Wyoming.

◆ ◆

To Survey Post-War Appliance Needs

The American Gas Association's Post-War Planning Committee, through its subcommittee on new and improved post-war gas appliances, F. M. Rosenkrans, chairman, is making a survey of gas company recommendations for improvements of post-war gas appliances.

The results of this survey will be publicized in the industry generally as a guide to manufacturers and others interested in appliance research and development.

◆ ◆

Imperial Gas Buys Spheres For Transport and Storage

Two new 8-ft. spherical storage tanks were installed at Blythe, Calif., in July by the Imperial Gas Co., of Los Angeles, for its local distributor, G. L. McBride. The spheres are 9/16-in. in thickness and have a combined capacity of 3500 gals. They were built by Superior Tank & Construction Co., Los Angeles.

As this new storage will be propane it will make the entire Blythe service pure propane.

The Imperial Gas Co. has also recently completed the building of a new transport truck and semi-trailer under the supervision of J. J. Burke, assistant to President A. N. Kerr. This truck will carry two 8-ft, spherical tanks of ½-in. thickness and a combined capacity of 3500 gals., and has gone into distribution service among southern California dealers handling "Rockgas" propane.

◆ ◆

LP-Gas Production Is Essential Activity

In a list of essential activities reissued by the War Manpower Commission on Aug. 17 as they pertain to the gas industry, are the production of chemicals and allied products and essential derivatives thereof, including compressed and liquefied gases.

Also named are production of petroleum, natural gas and petroleum and coal products, including production of tar and pitch, coal gas and coke; and heating, power, water supply and illuminating services, including electric light and power, water and gas utilities.

◆ ◆

W. S. McCutcheon Sells Business To Uregas, Inc., Moberly, Mo.

W. S. McCutcheon, who has operated for several years in Paris, Mo., under the name of the McCutcheon Gas Service & Equipment Co., has sold his business to Uregas, Inc., of Moberly, Mo.

Mr. McCutcheon expects to re-enter the LP-Gas business soon in central Kansas.

South American Conference On Liquid Fuels Meets Oct. 5

According to an announcement from Carlos R. Vegh Garzon, president of the South American Petroleum Institute, there will occur on Oct. 5-12 the first conference ever to be held on liquid fuels in South America. The convention city is Buenos Aires.

The meeting is to consider ways to intensify the production of liquid fuels in South American countries; to determine economies of utilization, and to examine the possibilities of increasing the exchange of such fuels among South American countries. Visitors are expected from North and Central America.

The Institute maintains a permanent office in Montevideo, Uruguay, where an extensive library on petroleum and its products is being developed. German E. Villar is secretary of the Institute.

◆ ◆

Truck Operators Must Keep Permanent Records Now

All single and fleet truck operators should keep permanent records of their operations beginning Sept., 1943, under a new ODT procedure, the Office of Defense Transportation announced Sept. 9.

ODT said that fleet operators beginning the first of this month should keep permanent records of the following:

1. Number of power units operated (trucks, truck tractors).
2. Miles operated with vehicles owned.
3. Tons or gallons carried.
4. Number of gallons of motor fuel consumed in vehicles owned.
5. Miles operated with vehicles leased from others.
6. Miles operated by vehicles owned and leased to others.
7. Number of truck days lost because of manpower shortage, inability to procure replacement parts, lack of business, lack of tires and other causes. (List according to trucks less than 1½ tons, 1½ tons and over 1½ tons).

Beginning with Sept. 1 ODT declared that single unit operators are required to keep weekly records of:

1. Total miles operated.
2. Total gallons of motor fuel consumed.
3. Total units (tons or gallons) of traffic transported.

Under the new procedure, ODT officials stated that fleet operators are not required to submit quarterly reports to ODT. They said that both fleet and single unit operators will be requested from time to time to submit reports to ODT based on the permanent records they are now required to keep.

◆ ◆

New Order Says Tank Cars Must Have Capacity Loads

An amendment to Special Direction ODT 7, Revised-2, issued on Aug. 25, became effective Sept. 1. It prohibits the movement of tank cars not loaded to capacity unless they are covered by a general permit specifically authorizing a departure from the loading requirements of the direction.

Permits issued under other ODT orders thus will no longer sanction non-compliance with the loading requirements.

◆ ◆

Recapping Made Easier By New Amendment

Under a new amendment which became effective on Aug. 19, dealers with recapped truck tire carcasses in their possession may get truck-type camelback needed to recap these tires by applying to their OPA district office.

The amendment also provides that manufacturers may sell used truck tires to dealers without rationing certificates under authorization of the OPA district office.

Kinds of Rationed Stoves Are Listed

Rationing of domestic heating and cooking stoves became effective Aug. 24. (See BUTANE-PROPANE *News*, Sept., 1943, Page 68.) All domestic customers desiring to purchase new gas cooking or gas heating stoves must apply to local rationing boards for a stove purchase certificate.

The gas appliances rationed are:

1. All gas cooking stoves or ranges designed to burn natural, manufactured or bottled gas for domestic cooking.

2. Gas heating stoves which are above the floor stoves or heaters designed to burn natural, manufactured or bottled gas for heating domestic space without the use of pipes and ducts for conveying heat to such space.

At the present time, gas water heaters, gas furnaces, floor furnaces or other heating equipment using pipes or ducts for conveying heat are not rationed. Additional appliances which are not rationed are gas hot plates, laundry stoves and ovens.

Customers desiring to purchase this rationed equipment must secure the application form R900 from the local ration boards.

Customers qualified to receive these ration certificates are those who do not have any equipment to cook or heat with or find it necessary to purchase new equipment to replace that which is worn out, damaged or destroyed beyond repair.

Beginning Sept. 16, no dealer, distributor or manufacturer may acquire a stove, and no person may transfer a stove to him, under a contract, agreement or other arrangement entered into between them before Sept. 1, unless a certificate was given up by the transferee to the transferor before Oct. 1. Moreover, in all such cases, the certificate must be given up before the stove may be transferred.

◆ ◆

Blanket Preference Ratings For MRO Are Broadened

Blanket preference ratings assigned for MRO purposes may be applied by persons eligible to use them for the repair of plant machinery and equipment, even if the repair job does not involve delivery of repair parts or materials, the War Production Board ruled through issuance of Priorities Regulation 3, as amended Aug. 10.

Blanket MRO ratings are assigned by CMP Regulations 5 and 5A, certain orders in the "P" series, and certain other WPB orders and regulations and on forms and certificates where the kind and quantity of this material to which the rating may be applied is not specified. In any case where the quantity of material is specified in terms of dollar value only the preference rating is a blanket MRO rating.

Ratings assigned on PD-1A, and PD-3A certificates and other ratings assigned to the delivery of specific repair parts or materials may also be applied to installation of the parts or materials or to the repair job alone if it is found that installing the parts and materials is not necessary. However, in the case of ordinary plumbing, heating, electrical, automotive, or refrigeration repairs, a rating may not be applied to repair work even if it is expressly applicable to repair parts or materials.

◆ ◆

LP-Gas Business Picks Up With Oklahoma Dealers

An easing up in restrictionss covering the obtaining of materials and equipment for making essential LP-Gas installations in Oklahoma is evidently accountable for a notable increase in the number of applications for licenses made to T. J. Ellis, state liquefied petroleum gas administrator.

It has been easier to secure tanks, particularly, according to Mr. Ellis, who states, "We have issued more licenses to dealers and their employees within the last two months than were recorded for several months previously."

Pacific Coast Changes In ODT Head Personnel

The Office of Defense Transportation announced July 30 five head personnel changes in the Pacific Coast Region of the Division of Motor Transport.

Roy Long, formerly motor transport district manager at Los Angeles, has been appointed manager of the Pacific Coast Region with headquarters in San Francisco. Mr. Long replaces Harold C. Arnot who was recently named director of ODT's motor transport division with headquarters in Washington, D. C.

William C. Klebenow, formerly Mr. Arnot's assistant at San Francisco, succeeds Mr. Long as Los Angeles district manager.

Marshall E. Nauman, formerly assistant district manager at Los Angeles, succeeds Herman Sites as district manager at Portland, Ore. Mr. Sites is on military leave from the ODT as a commisisoned officer in the army.

Clifford Nickerson, formerly district manager at Seattle,Wash., succeeds Wilfred Grummel as senior transportation specialist in the regional office. Mr. Grummel resigned from ODT to return to private industry.

Holley I. Smith, formerly district manager at Spokane, Wash., has been appointed district manager at Seattle.

◆ ◆

W. L. Moreland Becomes WPB Regional Director

Watt L. Moreland, former president of the Los Angeles Chamber of Commerce, took office Sept. 1 as deputy regional director of the War Production Board, in charge of all WPB activities in Southern California.

Mr. Moreland replaces Alexander Macdonald, who resigned to return to his law practice.

E. L. Payne is New President Pacific Coast Gas Association

At the fiftieth annual meeting of the Pacific Coast Gas Association, held in Los Angeles Sept. 22-23, E. L. Payne was elected president for the ensuing year. Mr. Payne is vice president and general manager of the Payne Furnace and Supply Co., of Beverly Hills, Calif.

Other officers elected are: O. R. Doerr, vice president; and D. G. Martin, treasurer, both of the Pacific Gas & Electric Co., San Francisco. New directors for the two-year term are: F. F. Doyle, Pacific Gas & Electric Co.; W. J. McCoy, Southern Counties Gas Co.; D. H. Perkins, San Diego Gas & Electric Co., and A. H. Sutton, Mission Water Heater Co.

◆ ◆

Effective Date of Rail Rate Order Postponed to Nov. 30

The effective date of the ICC order directing a change in rail rates of LP-Gas in the case of Green's Fuel, et al vs. the Sante Fe and other railroads has been postponed from Sept. 30 to Nov. 30, according to an announcement by the Commission dated Aug. 17.

The original order of May 15 provided that hereafter railroads serving the complainants should base their rates upon the actual weight of 4.7 lbs. per gal. instead of the 6.6 lbs. per gal. that had been followed formerly.

◆ ◆

D. C. Marschner Advanced To Higher Position by Shell

D. C. Marschner, assistant manager of the sales promotion advertising department of Shell Oil Co., Inc., has been named acting manager of that department, according to an announcement made recently by P. E. Lakin, vice president—marketing.

CLASSIFIED

Classified advertising is set in 6-point type, without border or display, at the rate of 10 cents per word per insertion; minimum charge per insertion $2. Box numbers for replies count as 5 words. Count as a word each one letter word and each group of figures. Classified advertising is only accepted when payment accompanies order. Copy and payment must reach publisher's office prior to 10th of month preceding publication.

EQUIPMENT FOR SALE

FOR SALE—2—2000 GALLON WC STORage tanks 4 feet by 200 feet long—now used for storage of propane. Tanks are completely equipped with liquid level gauge, loading valve, 200 pound relief valve, et cetera. Price $1500.00 each. Immediate delivery . . . write or telephone. FOB cars. Rural Natural Gas Co., Salem and Coolidge Ave., Mt. Washington, Cincinnati, Ohio.

GASAIR VAPORIZER, type W. 5, Max. W.P. 150 lbs., style A, and same make Regulator, for sale complete. Butane Appliance & Gas Co., Inc., 14409 Sylvan St., Van Nuys, Calif.

EQUIPMENT WANTED

EQUIPMENT WANTED—CASH PAID FOR 10,000 to 18,000 gal. propane storage tank or equivalent, with fittings. Also propane pump. Mention inspection markings and state where used, where now located, kind of construction, year made, price. Box 185, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

WANTED—NEW OR USED PROPANE OR ICC-116 or ICC-7-70 cylinders; used regulators and cylinder valves. Box 495, Syracuse, N. Y.

BUSINESS OPPORTUNITY—OFFERED

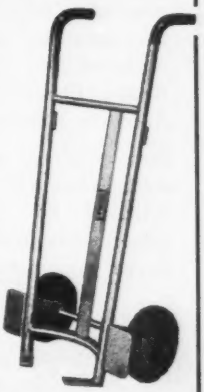
BUTANE STATION EQUIPPED FOR BOTtle and truck service. 3000 gallon storage tank, pump, meter, etc. Also 1½ ton tank truck used in delivery service—one 250 gallon tank on trailer. Munger's Butane Service, 1721 Napa Road, Vallejo, California.

BUSINESS OPPORTUNITY—WANTED

MAN EXPERIENCED ESTABLISHING, managing large LPG dealer organization, sales, installations, and service instruction would exchange services for interest in well established LPG business in the south or buy on terms. Best references. Box 175, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

INTERESTED IN PURCHASING BUTANE or propane gas business in Florida. Send complete details to Box 180, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

THOMAS highly useful
DOUBLE DUTY HAND TRUCKS



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Cradle construction accommodates any size cylinder up to 100 pound capacity. Wide Bottom flanges give support for appliances. Web strap (optional) holds appliance rigidly.

Rounded handle grips permit skidding from end of delivery truck. Time saving, labor saving, cost cutting.

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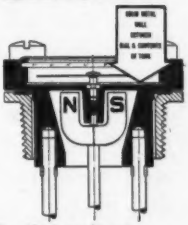

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